THE MONTHLY FOR RESELLERS

MARCH 1998 Vol 4 No.3

Canadian Computer Wholesaler

HIGH-END SYSTEMS

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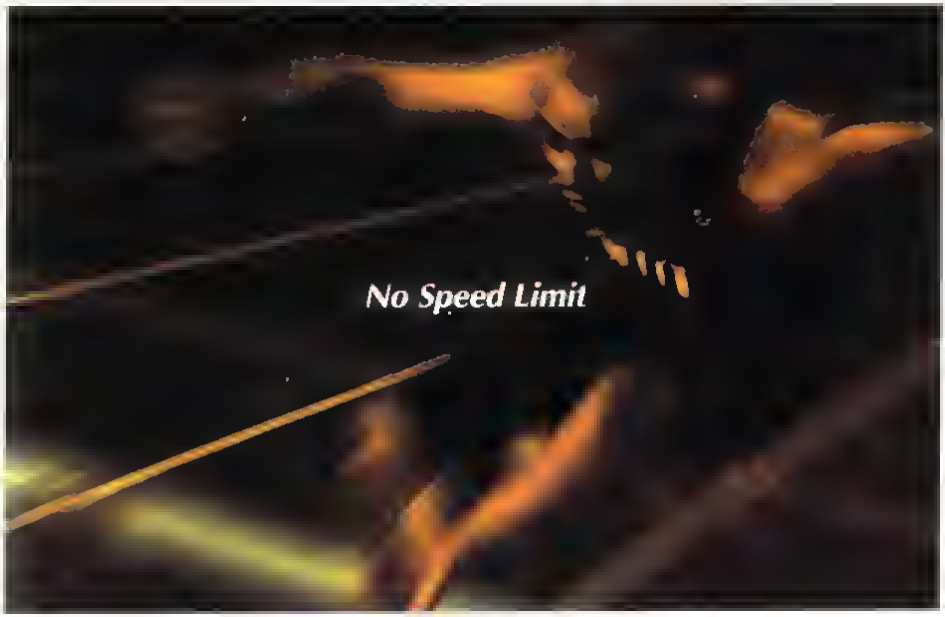

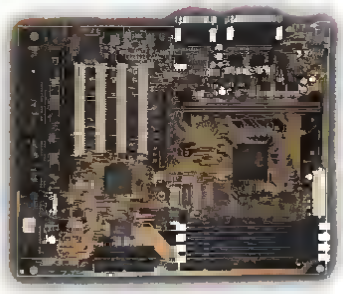

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No Holds Barred!

1998 is shaping up to be super-active, and this issue of *Canadian Computer Wholesaler* is no exception.

We've got acquisitions, changing corporate strategies, new presidents, old presidents (Compaq, Merisel, page 61) and best of all — significant technological advancements. Our cover story this issue, ("*High Performance Redefined!*" page 38), comes direct from our Toronto Lab Tests under the direction of Lab Test Editor Steve Halinda, where they put the very latest generation of high-powered PCs through their (speedy!) paces. Many of those machines ran on Intel's latest 333MHz Pentium Pro processor — arriving in systems near you, ready to crunch through graphics and compute-heavy graphics applications.

If your customers are willing to pay for the privilege of power-packed processing — they can see significant processing gains in video imaging, interactive DVD and serious gaming, for example.

Compaq gets serious

Topping the industry news this month was of course Compaq Computer Corp.'s announcement of an US$9.6 billion acquisition of Digital Equipment Corp., creating the second largest computing company, second only to IBM Corp. This is yet another example of the consolidation trend in this industry, and gives a significant boost to the Wintel platform, further strengthening the power of the Microsoft-Intel-Compaq triumvirate. Associate Editor Jeff Evans examines the history, relationship and power of these giants, in "*The Three Caesars*," page 18. Sheer momentum, size, and the apparent warmth between these players bodes for a strong working relationship for some time to come.

Microsoft and Digital themselves have played very nicely together under the banner of their Alliance For Enterprise Computing (AEC), which was just intensified by the launch of AEC II. (Please see "*Digital And Microsoft Reaffirm Enterprise Alliance*," page 18.)

While Digital is a significant player in both notebook computers and desktops — (and don't forget the massive Kanata, Ont. manufacturing facility), that wasn't the real appeal of the acquisition for Compaq. Rather, Digital's penetration into high-end corporate computing markets and the company's impressive service organization are exactly what Compaq needs to be taken seriously at its quest to dominate the spectrum of computing, and to compete on an enterprise level with IBM. Combine the corporate strength of Digital with last summer's acquisition of Tandem Computers Inc., and the intended message is clear: Compaq is a serious computing company for serious business.

Netscape browsers anyone?

Also significant this issue, is Netscape Communications' announcement that it is providing its Netscape Communicator 4.04 browser free to the market-place. (I downloaded it myself, and can attest that it has significantly more features, and alas, more crashes than Netscape Navigator 3.)

The move is widely held to be a response to the eroding of Netscape's browser market-share, as Microsoft Corp. has been providing Internet Explorer free of charge.

Yet, Netscape is still the darling of the Internet community, endeared by its tough little guy attitude, not to mention the perceived class of porting its browser to 17 different computing platforms, including the much-loved (among Netizens) Linux. More noteworthy yet, Netscape is making the source code for Netscape 5.0 available to developers, a move that is expected to boost third-party development for the browser. Meanwhile, the company is signing up OEMs to distribute the browser with their systems. (Please see "*Netscape signs 3,000-plus OEMs*...," page 11.) Jonathan Tice, the new director of marketing for Netscape Communications Canada Inc. in Toronto said there's "a real opportunity" for Canadian ISPs and system manufacturers to get involved in the distribution of the browser.

One can only hope that Netscape continues to have the drive and resources to continue to develop and push the envelope on Internet browsers, as competition is by far the best means of ensuring advancement.

What do you think? Has Netscape made the right move with this announcement? How do you feel about Compaq buying Digital? Drop me a line at gracec@netcom.ca.

Of course, it's only March. Fasten your seatbelts, ladies and gentlemen, something tells me we're in for quite a ride.

Grace Casselman
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Satellite more attractive thee cable

Most computer customers express interest in cable modems, but many also have cable TV access and realize that the cable companies have a poor record for delivering clear TV signals, or even delivering service without interruption. Many customers already are fed up with cable and have purchased satellite dishes for TV.

Direct satellite Internet access — imagine the bandwidth — sounds like the future to me.

Glen Ross, owner
Brick Technologies, Toronto
bricktech@sprint.ca

Cable not yet cost-effective

In my local area of rural Nova Scotia, I have explained to my customers that the extra expense of purchasing an Ethernet card and the (cable modem) Internet service — coupled with the fact that the speed is very compatible with PDTS-based modems — offers little advantage at this time.

Modems come pre-installed on most systems nowadays. On average it costs approximately $54.66 for cable-based Internet per month, tax included and this does not include the cost of the card itself, as opposed to a basic telephone line being $24.04 and the Internet service costing $26.35 tax included.

A greater savings could be obtained if (the customer) intends to use the same telephone line as they have in their homes now. So buyer beware, source before you spend.

Neil L. Rideout
director of research and development
Software Engineering Research Company of America, New Waterford, N.S.
nrideout@atcon.com

Many factors crucial for notebooks

This is a very tough question that you asked this month (Reader Poll, page 52). From personal experience, I look for all of these options.

I want processing power because when you're spending a large amount of money you don't want to have to replace (the notebook) every year. Screen size and quality is a definite concern because if I'm going to be using the computer a fair amount I don't want to be getting severe eyestrain from viewing something that is difficult to read. You don't want to be carrying something around for hours on end that weighs a lot, especially if you have to carry a briefcase also.

Battery life is a concern for users who will be using their computers a fair bit where AC outlets are not readily accessible. You don't want to be switching batteries every hour or two because of a short life battery.

Shawn Stemmler, president
Stemmler Computer, Brantford, Ont.
shawn.stemmler@computer4u.com

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EDITOR'S CHOICE OVERALL

Aug 1997

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Claris will reorganize company as FileMaker Inc.

Apple Computer Inc. has announced its Claris subsidiary will restructure to focus exclusively on FileMaker Pro line of database software.

This restructuring will include changing the company name to FileMaker Inc., the divesting of products other than the FileMaker Pro line, and laying-off approximately 300 Claris employees.

Beginning Feb. 1, Apple will distribute all Apple-branded software. In addition, Apple will develop, distribute and support the ClarisWorks integrated productivity software.

Hewlett Packard beats Sun in worldwide workstation sales

On Jan. 29, Hewlett-Packard gleefully announced its claim that after little more than a year of full-scale marketing of Windows NT-based workstations, HP's combined NT and Unix workstation sales had surpassed those of all other workstation vendors, including the traditional market leader, Sun Microsystems.

According to International Data Corp. (IDC) figures, HP sold more than 330,000 workstations, compared to Sun's 285,000 units. According to Dave McDonnell of HP (Canada) Ltd., the improved sales of HP's workstations are directly attributable to a strategy that HP has pursued for more than two years: to push the performance of its workstations by quantum leaps every six months or so. In independent benchmark tests, the latest HP workstations provide markedly better price/performance than competing Sun, Silicon Graphics or IBM workstations.

In a demonstration in *CCW's* Toronto office, HP showed the 3D muscle of its new Kayak PC NT workstation, using a Visualize fx4 graphics subsystem for real-time 3D performance.

HP's success is bad news for Sun, which despite an excellent reputation for quality and a large enterprise customer base, suffered a three per cent decline in units sold in 1997. That, along with the minimal success of the Java initiative, and Sun's doggedly anti-Windows strategy, is causing increasing concern about the wisdom of its current direction.

Motorola and Chromatic Research are planning 56K/DVD

(NB) — Motorola Inc. and Chromatic Research are unveiling plans to jointly develop a single chip offering combining 56Kbps modem and DVD technology, aiming for state-of-the-art multimedia home PCs, priced at under US$1,000, by the end of this year.

Motorola's Mike Tramantano and Chromatics' Dave Well said the deal is slated to result in shipment of multifunctional multimedia modem chips integrating Motorola's implementation of K56flex technology to OEMs (original equipment manufacturers) by early in the second quarter of this year.

The first version of the chip will be fully upgradeable to V.pcm, with OEMs deciding individually whether to provide the software upgrade as downloads or by other means.

Standard for 56Kbps modem technology is finally a reality

(NB) — The International Telecommunications Union (ITU) has approved a preliminary standard for 56Kbps modems, according to 3Com. 3Com developed the x2 56Kbps technology, which directly competed with and could not communicate with the K56flex technology developed by Lucent Technologies and Rockwell International.

The standard was approved at an ITU conference in Geneva, Switzerland, officials said. The new ITU standard will be assigned a new V-series number. It was previously called "V.pcm" for "pulse code modulation."

ITU's next step for the new 56Kbps standard is to formally ratify it at another meeting this September. But the final vote is usually just a formality.

Manufacturers of modems that have used the 3Com x2 and the Lucent/Rockwell K56flex technologies have promised software upgrades to the new standard. That same pledge has been made to ISPs and others who have also used the older proprietary 56Kbps technologies, and will use the new standard. Previously, x2 modems could not "talk" with modems equipped with K56flex at 56Kbps-class speeds.

In January, 3Com and Lucent Technologies said they would begin testing their respective 56Kbps modems to make sure they communicate with each another when using the new standard. New modem products based on the draft standard should be available from both companies within a few months, officials said.

Netscape signs 3,000-plus OEMs for free browser program

(NB) — Just two weeks after announcing it would essentially give away its World Wide Web browser, Netscape Communications said it had signed more than 3,000 original equipment manufacturers (OEMs), Internet service providers (ISPs), and other partners to distribute Netscape Communicator and Navigator.

Netscape's "Unlimited Distribution" program promises to distribute more than 36 million copies of its Communicator and Navigator programs with "no strings attached," Netscape officials said.

Netscape announced the program in January, after it saw Microsoft make significant gains in the Web browser market — a market Netscape essentially created when it began giving away copies of its Navigator browser three years ago.

Netscape's share of the market has gone from virtual dominance to 60 per cent — according to Microsoft.

Netscape's new plan allows ISPs, OEMs and telecommunications companies to freely distribute both the standard edition of Communicator and the Navigator Web browser. Netscape's Navigator stands alone, while Communicator integrates Navigator with messaging, E-mail and other products.

Netscape also announced a new program to provide developers with the basic software code to a next-generation Communicator 5.0. With the "source code" in hand, developers will more rapidly bring new Internet applications, applets and features to the Web for everyday users and custom corporate environments, Netscape expects.

Contact: The Editor

LETTERS

Canadian Computer Wholesaler welcomes your opinions on current issues in the market, plus your feedback on our publication.

NEWS

We welcome your ideas regarding news and feature topics for *Canadian Computer Wholesaler*. Feel free to contact the editors directly with your suggestions.

TEST LABS

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Symantec denies CyberMedia allegations

(NB) — Within hours of being notified of a lawsuit filed against it by CyberMedia Inc., Symantec Corp. issued a formal denial of any wrongdoing

Gordon Eubanks, Symantec's president and chief executive officer (CEO), said "If you take the big picture, what we know now and what's true is that the product was written by an independent company, Zebrasoft, and we licensed it from them," the executive explained. "We're indemnified in that licence."

"We've received a copy of their suit and we're analyzing it, looking at each of their claims," Eubanks continued. "We take matters like this very seriously and we have a lot of people working late right now looking at everything about this"

The product at issue is Symantec's Norton Uninstaller Deluxe, a utility that monitors program installations and removes them later with no unneeded files left behind. It also performs other hard drive "housekeeping" chores. In the lawsuit, CyberMedia alleges the Symantec product contains program code on which Cybermedia owns the copyright. CyberMedia also named Atlanta-based Zebrasoft as the original developer of the Symantec program

Eubanks said "We have no reason to believe Zebrasoft did anything to misappropriate CyberMedia technology. We haven't had a long time to analyze it, but Zebrasoft really uses a different architecture from what other uninstallers use, to our knowledge"

CyberMedia seeks damages and wants the court to keep Symantec from selling the product. It also wants Symantec to recall all copies of the Norton Uninstall product from distributors and retailers

Microsoft Network plans beta MS Start page

(NB) — Late this year, subscribers to Microsoft Network (MSN) will find Microsoft's on-line experience opening to a new concept and home page called MS Start. A company spokesperson said "MS Start will emphasize three concepts, practical portable and personal" The practical element is based on Microsoft's use of the a search engine from Inktomi. The portable piece is accomplished through Hotmail, a recent Microsoft acquisition, which allows users to send and receive secure E-mail from any device with Web access.

For the personal part of MS Start, users will get "Start Clips" Short phrases or sentences about a news topic or travel bargain or sales item based on a user's customized list will appear A click of the mouse takes a user to a Web site to get a full version of the information

"This is a very early look at something we do not expect to ship until late this year," said the spokesperson.

Apple Computer trims American retail presence

(NB) — Apple Computer Inc has received mixed reviews and raised eyebrows with its termination of retail agreements with Best Buy, Circuit City, Computer City, Office Max and Sears One analyst said the strategy was one more act of Apple's "corporate destruction committee," while another said the announcement was only partially surprising

On a U.S national level, Apple plans to focus attention on CompUSA's 148 retail stores Late last year, the computer hardware and retail superstore chain debuted a new Apple merchandising concept called a "store within a store" Within a certain area of each store, CompUSA created a small Macintosh store which is serviced by individuals with specific Macintosh training

Digital Equipment unveils 21264 Alpha chips

(NB) — Digital Equipment Corp has unveiled a third-generation Alpha architecture billed as the first to crash the gigahertz speed barrier The news came just one week to the day after the announcement of Digital's merger with Compaq Computer, to form the world's second largest computer manufacturing firm behind IBM "The last seven days have been interesting," acknowledged Harry Copperman, senior vice-president and group executive, Digital Products Division

The new 21264 Alpha architecture will operate "two to five times faster than any other processor (either now) or on the horizon," according to Copperman

Digital plans to target the new 21264 architecture at four main markets data warehousing and data mining servers, "enterprise applications," especially in the area of OLTP (online transaction processing), Web servers operated by ISPs (Internet service providers), and desktop applications in arenas like video, animation, games, and entertainment.

Digital is now sampling the 21264 processors among OEMs but pricing has not yet been announced

Fujitsu announces three-volt CMOS A/D converter

(NB) — Researchers at Fujitsu Ltd. say they have developed the world's fastest CMOS analog to digital (A/D) converter The chip is capable of a top speed of 400 mega-samples per second, said the company

The speed of the six-bit A/D converter is expected to be put to use to speed up the operations of computers and consumer electronics, such as networking equipment and disk drives It was produced using a three layer (one layer of polysilicon and two layers of aluminum) 0 35 micron CMOS process and requires a three-volt power supply

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AST Canada operations slashed

AST Canada says certain functions have been consolidated with U.S. operations, as staff size is reduced from 54 to 21 employees

Most departments have been reduced in size, says AST Canada and some, including marketing have been consolidated with AST USA. Accounting, sales and service, systems engineering and warehouse departments continue to operate in Canada

"We are focusing our efforts on ensuring that AST maintains a high level of service and support for our Canadian customers," said John Whitnall, general manager of AST Canada.

Telecom industry to cooperate on Year 2000 issues

(NB) — They may be competing for long-distance dollars, but major Canadian telecommunications carriers are working together to deal with the Year 2000 problem. A group of companies, including the Stentor consortium of regional phone companies, AT&T Canada Long Distance Services Inc., Sprint Canada Inc., two major cable-television companies, and several others have formed the Year 2000 Telecommunications Industry Forum to deal with the infamous date problem

Some telecommunications equipment, like many computers, will behave strangely when confronted with dates beyond Dec. 31, 1999, because programs have been written with only two digits to represent the year in dates. As a result, the systems may think dates in 2000 are 99 years earlier than dates in 1999, rather than a year later

The various telecommunications carriers are working to make sure their networks keep running properly through the turn of the century, by correcting software problems and pressing equipment vendors to make sure their hardware will function correctly

PSINet Inc. has big consumer internet plans for iStar

(NB) — The acquisition of iStar Internet Inc. will give PSINet Inc. a presence in the consumer Internet access market for the first time

PSINet Canada has secured more than 70 per cent of Ottawa-based iStar's shares in a takeover bid launched a few weeks ago, and plans to make the company private and operate it as a consumer Internet service provider (ISP)

Speaking to a group of reporters during the Internet World Canada show and conference in Toronto, Nadir Desai, president and chief executive of PSINet Canada, said his company will use the iStar brand for its consumer business — a market segment PSINet has not entered in any country other than Canada — and the PSINet brand for its commercial ISP operations. iStar's commercial customers will be moved over to the PSINet service, he said

Desai said PSINet chose to keep the iStar brand because of the recognition it has. He also said part of the benefit to PSINet in acquiring the company lies in the people working for iStar

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"Sceptre takes top honors with the Sceptre Soundx 5500, which leaves all the other notebooks in its tracks when running NSTL's gauntlet of performance benchmarks This is a very fast desktop replacement with a 233-MHz Pentium® processor, a 13 3-inch XGA display, and a roomy 3GB hard disk drive for storing large multimedia files "

NSTL PC Digest, September 1997

Best Buy - *PC Portables*

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PC Portables, November 1997

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The Three Caesars

by Jeff Evans

The recent purchase of Digital by Compaq marked a notch upward in the progress of the Windows personal computer into the big leagues of the information technology market. Moreover, this is the emergence of Compaq as a new giant on the computing scene. For much of computing's history, the global IT market was dominated by one company, IBM, chased by a couple of dozen considerably smaller Japanese and American computer vendors and component makers such as Digital, HP, NEC and Hitachi.

There was a period in the 1970s and early 1980s when it seemed that the Japanese might become dominant in computing, but the Japanese challenge, at least for the time being, has lessened. Instead, with the movement of the personal computer into the heart of enterprise computing, three upstart U.S. companies have between them come to occupy a position of influence in computing which far outweighs their 'relatively' modest revenues. Microsoft and Intel, makers respectively of the most popular software and CPU chips for PCs, have benefited from a close partnership dating back many years. More recently, and especially with the announcement of its acquisition of Digital, Compaq has become the third member of a new American triumvirate which increasingly sets the direction of computing around the world.

Intel's Andy Grove

Compaq to acquire Digital for US$9.6 billion

On Jan. 26, Compaq Computer Corp. announced an agreement to acquire Digital Equipment Corp. and form the second largest computing company in the world, second only to IBM Corp.

"This merger gives Digital tremendous reach and credibility in the marketplace," said Digital chairman Robert Palmer, in a statement. "It gives us the scale and resources to make continued investments in our key technologies and services."

The acquisition was widely held to be the boost Compaq will need to seriously compete in high-end corporate environments.

Why Not Japan?

Many of the Japanese technology firms that seemed poised to crush their American counterparts a decade-and-a-half ago were divisions of even larger industrial conglomerates or trading companies, such as Mitsubishi, NEC or Hitachi. They had the deep pockets and long-term investment strategies to give them an edge in the great game of global high tech competition. However, in spite of the supposed deficiencies of American industry (short-term investor thinking, unstable corporate management and unreliable workforces), America survived the Japanese challenge and has remained the dominant global player in computer technology from the inception of the computer in the 1940s until now. Part of America's durability in computing is historical, based on the huge budgets for military, intelligence and space research.

Digital and Microsoft reaffirm enterprise alliance

by Grace Casselman

While the event may have been slightly overshadowed by Compaq's announcement of the Digital equipment just two days before, Digital and Microsoft brought out their top guns on Jan. 28 in the form of Robert Palmer and Bill Gates to announce an expansion to their alliance.

"Our alliance with Microsoft is strong and enduring," said Palmer, speaking at the San Francisco event. "It's worked so well. It showcases how two companies should work together in the best interest of their customers."

And Gates said the alliance, which was first struck in 1995, has "exceeded expectations. Digital was willing to bet on Windows NT... (now) the NT momentum is very strong."

The two companies rolled out the sequel to their Alliance For Enterprise Computing, called AEC II, with the acceleration of the implementation of NT and BackOffice as a primary goal, leveraging Digital in the 'primary integrator' role. In fact, Digital currently has more than two million Exchange seats under contract. Digital plans to increase its total of Certified Systems Engineers and Certified Solutions Developers from 1,600 to 3,000 by the end of 1999, with at least have of those certified on SDL Server and half focusing on Exchange and Internet technologies.

Reuters Holdings plc., is a customer of the two companies. Peter Job, chairman of the company, commented, "The two companies are very well placed to give satisfaction. Digital knows how to build hardware for demanding applications, and has a very large workforce around the world."

"Microsoft has recognized Digital's ability to deliver services across the entire globe," said Robert Delbello, Windows NT marketing manager at Digital Equipment of Canada Ltd.

But Digital is also expected to run NT on 32 and 64-processor systems, starting in early 1999. The two companies are also collaborating on enabling 64 bit systems to ship with NT 5.0 and SDL Server.

John MacDonald, vice-president of marketing for Digital Equipment of Canada, pointed to the growth of Windows NT. "It's the opportunity of the '90s. It represents an opportunity for everybody."

Industry analyst Tom Kucharvy, president of Summit Strategies, commented. "There was much substance in this agreement. Digital has demonstrated a very strong commitment to Microsoft — especially NT and Exchange, and has generated a lot of revenue. Since both companies benefited, they are expanding the relationship. This will be especially important in light of Compaq's acquisition of Digital, giving Digital (and its demand creation capabilities and services) much more credibility in addressing enterprise customers."

Digital stats:

- 1,600 Microsoft certified support personnel — more than at Microsoft!
- 29 Microsoft Authorized Support Centers
- 450 service delivery locations in 100 countries
- 3 million seats, have been migrated to NT

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programs during the Cold War. Perhaps more uniquely, America has benefited from some of the same social characteristics that are sometimes regarded as weaknesses, namely — individualism and lack of 'discipline,' in the sense of refusing to follow an official master plan for the future of computing. The nerd/entrepreneur culture of Silicon Valley and America's other high tech hot spots has fostered a chaotic, but creative flood of new inventions. It has helped America remain the main innovator of fundamental new ideas and products, and allowed the U.S. to stay ahead of better-organized but slower to react competitors. Of course, the Japanese still excel at refining technology to yield advanced commercial products.


Microsoft's Bill Gates

In particular, Microsoft and Intel have benefited from being indiscriminate as to whom they will do business with. Microsoft will directly or indirectly provide Windows to virtually any vendor, and has developed versions to run on such non-Intel platforms as CE, MIPS, PowerPC and Alpha. It has a long history of making software for the rival Macintosh platform. For its part, Intel has fended off competition from 'clone' chipmakers such Cyrix and AMD by innovating ever faster and cutting prices aggressively. Ironically, much of Intel's current strength probably comes from its paranoid obsession with staying ahead of the cloners. By driving the prices of its latest Pentium II chips down very quickly, for example, Intel both boosts demand for its fastest new processors, and makes life much harder for the competitors struggling behind it.

However, in spite of the success of the Microsoft/Intel alliance, what was missing was a PC equivalent to IBM, a single-minded PC company able to sell integrated solutions into the global enterprise computing market.

IBM's PC operation was for many years hobbled in the effectiveness of its promotion of efforts political drag from older IBM divisions selling lucrative, high-end mainframe, server and workstation products based on proprietary IBM products. IBM's PC division, until recently, was also burdened with the need to push IBM's proprietary OS/2 product.

Compaq, founded in 1982, was never anything but a PC maker. With its internally developed desktop PCs, notebooks and servers, it has become the principal supplier of Windows/Intel computers to the business market. However, its progress into the higher echelons of 'big iron' networked enterprise computing was painfully slow. Compaq decided on a campaign of strategic acquisitions to turn it into a true enterprise computing company, buying Tandem Computer, a number of networking product lines, and finally, Digital. However, the focus of the company is still the Windows/Intel platform.


Compaq's Eckhard Pfeiffer

Now, Microsoft, Intel and Compaq are computing's Big Three, with combined revenues greater than still-mighty IBM, and with historical growth rates faster than IBM. They are poised to extend the Windows/Intel computing platform as the mainstream solution for big business. As the three dominant players at the dawn of the next century, Microsoft, Intel and Compaq have an opportunity to continue their rapid growth, displace Unix and other high-end operating systems more quickly than expected, and provide new business opportunities for a vast web of third-party product developers, vendors and service providers around the world.

Jeff Evans is Associate Editor of Canadian Computer Wholesaler. He can be reached at jeff@tcpon.com

I Spy A Pie In Bill's Eye

by Jeff Evans

A prankster's pie in Bill Gates' face during a visit to Brussels took public attention away from more mundane but still important Microsoft news in late January and early February. Just prior to his junket to the pastry capitals of Europe, Gates had held a major press conference in San Francisco along with Robert Palmer, CEO of Digital.

The original intended purpose was to restate the two companies' commitment to their Windows NT/enterprise computing alliance.

With the announcement of the takeover of Digital by Compaq, a major reason for pressing on with the media event became the need to reassure the market that the Windows enterprise computing alliance would continue, even under new management.

Representatives from Compaq were on hand to assure the industry that the takeover of Digital by Compaq would not have a negative impact on the Digital/Microsoft alliance. In fact, according to a Compaq spokesman, it was precisely the combination of Digital's NT and UNIX expertise, and a vast corporate customer base, which made Compaq interested in acquiring Digital.

Gates told *CCW* he expected the new, enlarged Compaq to move NT even faster than expected into the high end corporate market. Gates claimed that many corporate customers see a dual UNIX and NT operating environment as a good thing, although, he said, smiling, much of the new corporate business is going directly to the NT platform.

Less widely reported were Gates' other activities in the Bay area. He visited schools which were the recipients of hardware and software donations from Microsoft, where he urged better quality educational resources for children, including access to the Internet, to help prepare them for the challenges of the global economy. Perhaps most interestingly, Gates forcefully acknowledged that Microsoft now realizes that after almost 20 years of ignoring the existence of government, it will now have to very quickly get very good at dealing with governments in Washington and elsewhere. According to Gates, instead of just helping to create the most fantastically successful industry in history, with all the jobs and spinoff corporate startups that have come from the PC, Microsoft must do a better job of explaining itself to the public and the government.

Although Gates' troubles with governments around the world may be just beginning, he has shown in the past a phenomenal ability to admit mistakes, identify strategic threats and opportunities, and then respond forcefully with the full resources of Microsoft and its numerous allies.

You Too, Brutus?

Gates will have his work cut out for him, as some who might be expected to be allies of Microsoft have chosen to use his time of troubles to take a stand against him. A public statement from the Software Publisher's Association, an industry grouping of over 1,200 software developers (of which Microsoft is a prominent member) obliquely criticized the possible ill effects on innovation of having Microsoft as such a dominant standard in the industry.

Considering that many of the SPA's members make their money in the Windows software market made possible by Microsoft, Gates might wonder who is going to come out of the woodwork next, either to throw a pie or stab his company in the back.

One would hope that Gates keeps his cool, and retains a sense of perspective. Those who have so actively lobbied to set government actions against Microsoft in motion may find that they've created a monster. The prospect of a politically engaged and savvy Bill Gates directing the resources of Microsoft in a counter campaign against the 'vast conspiracy' facing Microsoft (to borrow a phrase from Hillary Clinton), should give his critics reason to pause. Gates can probably shrug off the pie throwers, but he will be a dangerous opponent in courts of law and in the court of public opinion.

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E-Commerce VAR Is A New Breed Of Reseller

by David Tanaka

Throw up a Web site, rake in the cash How many of your clients believe that?

If you watch the trends, it seems Internet commerce is gaining a head of steam For example, Evans Research Corp in Etobicoke Ont reported in February that 60 per cent of respondents in its *Residential and Home Office* Internet study said they have purchased goods or services on the Web Moreover, 35 per cent said they do so at least once a month, according to ERC

Internet commerce is also often touted as the big equalizer for small business A small company with a smart and creative presence on the Web can be just as effective as a big company, or so the argument goes

But in reality, even though small companies might see the income potential of electronic commerce and virtual storefronts, they often do not have the resources to either explore or exploit the possibilities So despite the hype, electronic commerce remains realistic only for the companies that are willing to invest the resources to keep a Web site fresh and attractive

The infrastructure for E-commerce, in terms of secure transaction processing, order fulfillment and back room accounting systems, is quickly falling into place What's still missing is a way for individual companies with individual business needs to easily plug into the front end of the system That's where the E-commerce VAR comes in This consultant is the bridge between a business's traditional methods of marketing and selling, and the sometimes complex and unfamiliar operations that must be carried out in order to establish an attractive, effective and secure retail site on the Internet.

At the moment, this bridging function is being fulfilled in a few ways, with varying degrees of opportunity for value added services However as more E-commerce companies on the one side and small businesses on the other realize that something else is needed to complete that last mile other creative variations are sure to arise

IBM HomePage Creator

Last October, IBM Canada rolled out its HomePage Creator, a turnkey E-commerce solution aimed at small businesses that might want to test the waters without investing a truckload of cash For example, for $69 95 a month, businesses can buy into the Basic plan This would allow them to create a five-page Web site using the included Web creation tools and design templates, add a custom name, include a 12 item catalog, have the site listed on popular search engines, and include the facility to let customers securely order goods online A step up from that would be the Bronze plan, which allows merchants to securely process credit card payments online It also allows for a bigger catalog and more pages in the site

While the value-add opportunities here may be limited, consultants might just consider it as a low-risk testing bed to prepare their clients for bigger projects

MTS Ngage

And bigger projects are what Winnipeg-based MTS Advanced Inc wants for its Ngage Electronic Commerce solution MTS Advanced, the province's largest dial up ISP and a subsidiary of Manitoba Telecom Services, is rolling out the Ngage service through agents and value-added resellers MTS displayed its Ngage service at the Comdex/PacRim trade show in Vancouver in January

Ngage manages the chain of processes that typically operate in an electronic transaction environment This includes receiving orders, calculating the costs including taxes and shipping costs, processing payments and providing financial reporting to the retailer The company has been forging a number of partnerships to make this happen This includes relationships with Seattle-based iCat, an Internet catalog developer, Cambridge Mass -based Open Market, for its Transact transaction system, and Paymentech Canada which provides credit card and electronic payment processing services

Through its reseller programs, MTS hopes to attract Web developers and Internet consultants The company indicates that through its Ngage Certified Agent Program, it will provide training, software and technical support, and that VARs will receive a royalty on the transactions generated by their clients on the system.

Multiactive Technologies

Vancouver-based Multiactive Technologies is working on a plan that would offer ISPs and "Web Presence Providers" a way to provide E-commerce solutions to their small business customers The basis for the program is the company's Commerce Catalyst Suite, which comprises a Marketbuilder merchant Web site creation tool and Marketplace Engine, which is a Microsoft Internet Information Server-based merchant site host Last fall, the company announced it was working to develop an Authorized Channel Partner program So far the company has rolled out Real Estate Marketbuilder for local real estate agents and agencies

Other E-commerce companies are following similar strategies

Pandesic

It was recently reported in the U S trade press that Pandesic an E-commerce company formed by Intel and SAP, had established a partnership with The Vision Factory According to the report, the Vision Factory's Cat@log provides a friendlier front-end to Pandesic's backroom services CCW

Contacts:

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MTS Ngage —
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Pandesic —
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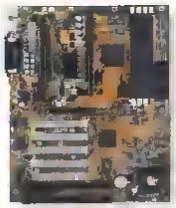

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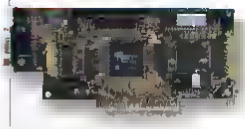

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BIG & small

Notebook Market Is Active In 1998

by Jeff Evans

Market-share growth may be stable, the kinds of notebooks being sold and the applications their users are putting them to, are changing rapidly — more so than on the desktop PC front.

In 1997, notebook computers accounted for about 17 to 20 per cent of the Canadian personal computer market, or nearly 300,000 units, according to various industry figures. The overall 1997 PC market grew by about 15 per cent in total sales over the year before, and notebooks maintained their market-share. The relative stability of the notebook's place in the Canadian market represents a plateau in the last few years, following a period during the early '90s when notebook sales expanded faster than the desktop PC market.

Jostling For Position

For many years, there have been a handful of notebook brands that were the regular leaders in the notebook market: Toshiba, IBM, Apple and Compaq.

Since the late '80s, Toshiba ISG Canada has dominated the Canadian notebook market, and won fame among Toshiba's international management as the most successful notebook operation in Toshiba's global business. By the beginning of 1998, it became obvious that Toshiba has become a big fat target for the other, hungry big brand names.

Competition has stiffened considerably, led by a combination of deep price cuts, especially by Dell, and aggressive introduction of the latest multimedia and processor technology.

Depending on what Canadian industry statistics one chooses to believe (and notebook sales stats can vary widely according to how they are collected and interpreted), Compaq and IBM have increased their market share to around 20 per cent each, while AST has declined to a negligible level, and Apple, after drifting down to about six per cent market share, may have leveled off. Dell has become a strong player, though still under 10 per cent of the market, and HP

Sharp and Canada's own Eurocom are all declaring that 1998 will be the year for them to vault from tiny percentages to major market share.

The 'Two Market Theory' Of Notebook Sales

Representatives from IBM, Compaq, Toshiba, Apple and Dell all voiced similar perspectives on the market and applications for notebooks in 1998 in conversation with *CCW*. In general, vendors see two major markets: a 'Desktop Replacement' market, and a 'Mobile Worker' market.

The desktop replacement notebook market is one in which a desk-bound employee trades in a desktop PC for a notebook which is powerful enough to perform all the usual office suite, networking

The Players

Although the top three notebook makers control more than 60 per cent of the Canadian market, and the top 10 represent over 80 per cent, 1997 saw some significant shifts in products and market share among vendors, and 1998 may see this trend continue. In general, "brand names" seem to have an increasing advantage, but among the most energetic new players will be Tier One computer companies, such as HP and Sharp, which are determined to significantly increase their sales of notebooks. Here is a partial list of major vendors, products and strategies.

Toshiba *(http://www.toshiba.ca)*

Toshiba of Canada, Information Systems Group (ISG), the traditional market leader, has been under heavy pressure from many of its competitors, but in early February, it responded with a major refreshment of its entire line. The new models range from its new budget priced Satellite 300 COS (with a 166MHz Pentium processor, a 12.1-inch screen, a 16X CD drive and a 2.1GB drive for $2,599) to the mid-range Tecra 550 COT with a 266MHz Pentium for $6,279, to its established Tecra 750 DVD, for over $9,000. Toshiba has the broadest spectrum of notebook PCs, (from the handheld Libretto 70CT through the Satellite and Portage lines, to the Tecra 750 COT) of any of the major vendors. Although not generally the cheapest brand, Toshiba has continued to benefit from some of the best warranty and service programs in the industry.

Compaq *(http://www.compaq.com)*

Compaq has spent the last year-and-a-half making good on its promise to retake the leading position the notebook market, which was originally its major area of strength. With a new line of Armada models featuring advanced manageability and networking options, and a competitively priced new line of Presario models, Compaq is aiming at both the enterprise and SOHO notebook markets.

IBM *(http://www.ca.pc.ibm.com)*

IBM's ThinkPad line holds a similar market share to Compaq and Toshiba, and has perhaps the best reputation for quality and technical innovation. For example, in addition to sexy desktop replacement-level models such as the thin-line 266MHz ThinkPad 770, IBM also offers leading edge features such as a cellular-capable 56K PC Card modem, and a wireless connector to allow notebook users to surf the Web from up to 200 feet from the nearest phone jack. IBM has so far refrained from introducing a Libretto-like handheld Windows PC, but it did recently introduce the IBM WorkPad, based on the popular 3Com Palm Pilot. Weighing only six ounces, the WorkPad has a HotSync feature that allows for automatic synchronizing of contact database and other information between a PC (usually a notebook) and the pocket-sized WorkPad.

Apple *(http://www.apple.com)*

With Apple diligently attempting a revival, the introduction of new PowerBooks based on the super fast G3 PowerPC chips has come as a welcome boost. Also, after years of lagging behind Windows notebooks in features such as CD-ROM drives, PC Card slots, graphics displays and IRDA compatibility, current PowerBooks are among the fastest, best-featured notebooks on the market. Apple representatives report that sales in the traditional Apple strongholds of communications, design and education are very strong.

Dell *(http://www.dell.com)*

Dell posed a severe challenge to all other notebook vendors in 1997, with a one-two punch of well-featured, low cost notebooks and an extremely popular direct sales channel via phone and, increasingly, over the Internet. Dell still has trouble convincing some potential customers that a direct mail business model is a safe one for mission-critical applications, but its offering of products very similar to particular in configuration to popular

and communications applications The notebook is not an 'extra computer,' it is the worker's 'only computer' The worker has the option of carrying the notebook home at night or on weekends to do work in the home office, but rarely carries the notebook around to multiple other locations Often, there is a full-sized monitor, keyboard, mouse and printer available at the one or two desks where the notebook is regularly used The key elements of a desktop replacement computer are a good keyboard and screen (though this need can be met by the add on keyboard and monitor), fast processor, good graphics, network connectivity and a good local hard drive Low weight and long battery life are not such an issue, because the computer is usually plugged into a power outlet for use, and it is usually only carried from the car to a desktop and back

The second market is the 'mobile worker' market. Mobile workers are outbound workers, such as sales reps, auditors and journalists, who need to travel to and work in many locations Depending on job duties, they may fall into either of two categories of mobile worker power users or utility users Mobile power users need desktop replacement muscle, with the lowest possible weight and long battery life To get this combination, they will have to buy the latest and greatest technology, at a premium price A top-of-the-line mobile power user notebook will cost from around $6,300 (for a Eurocom 8500 super notebook) to about $10,000 (for a Toshiba Tecra 750 CDT) At more modest price points, less demanding mobile workers will make do with light notebooks (six pounds or under) with slower processors, smaller screens and hard drives, and less exotic batteries Most important for mobile workers is connectivity many notebooks have built-in 33 6Kbps modems and some Compaq models even have optional internal Ethernet hardware

Price/Performance: Notebook Versus Desktop PC

The main factor holding down sales of notebooks is the fact that desktop PCs are so powerful at such a low price With notebooks, the user either has to pay several times the price of a desktop PC in order to get an equivalently configured power user's notebook, or else the user has to make do with a notebook that is substantially less powerful than even an entry level clone desktop PC As mentioned, Dell has been one of the more aggressive players in offering well-configured notebooks at much lower prices than its competitors Notebook price/performance is constantly improving the problem is that desktop PC price/performance has improved even faster in the last year As well, notebooks lag behind desktops in the availability of low power consumption or miniaturized versions of standard PC components

Toshiba models, at up to 40 per cent lower prices, has been very attractive to some

Hewlett-Packard ***(www hp com/omnibook)***
Although its OmniBook line is well respected and rates well in independent surveys, HP has generally remained stubbornly at the bottom of or outside the top 10 Canadian notebook vendors
Some positive trends according to HP, include a price drop on the ultra compact 3 9 pound OmniBook 800 model which has cause demand to jump "to the limits of production capacity," the new OmniBook 3000 model, a 6 7-pound powerhouse with a 266MHz processor, and 13.3-inch screen is gaining positive reviews and, a radical new line of ultra thin, ultralight (3 1 pounds, 12.1-inch screen) notebooks is expected to push the envelope of the notebook market in the second quarter of 1998 The new notebooks are the fruit of an alliance between HP and Mitsubishi
HP has also helped blur the dividing line between the OmniBook 800 and its electronic organizers with its HP 360LX and 620LX handheld CE computers

Digital ***(http://www.digital com)***
Digital's HiNote line, another well-engineered but modestly selling notebook line, has an uncertain future as a result of the takeover of Digital by Compaq. Compaq has committed its full support to Digital s customers and products, but until the current "quiet period" deciding the fate of specific Digital products such as the 266 MHz Pentium HiNote VP 745 and HiNote Ultra 2000 GTX5266M models is over, the exact nature of the HiNote's future, if any is uncertain.

Panasonic ***(http://www panasonic com)***
Panasonic has moved out of its me too status as another small player in the notebook market by promoting its CF 25 ruggedized notebook model, which has succeeded in raising the brand's profile. For more mainstream notebook purchasers, Panasonic also has attractive new products such as the CF 63 DVD-ROM notebook, or its 4 9-pound CF 35 thin-line notebook.

Dolch ***(http://www dolch com)***
Although Dolch has little presence on the street in Canada, its enormously rugged, heavy, "luggable" portable PCs are the market leader in extremely demanding applications Dolch offers portable NT servers gigabit networks and ruggedized LCD monitors, as well as desktop replacement portables A small player numerically Dolch is well-suited to its niche market, and consistently offers the latest components in its high priced but high-quality products

Sceptre ***(http://www sceptretech com)***
Sceptre is a major global vendor of monitors and notebook PCs, and its high profile development of the LCD monitor product category has made it much more visible in Canada Sceptre s SoundX 5500 multimedia notebook has won "Best Buy" awards in 1997 and Sceptre announced an expansion of its distribution in Canada when it signed Samtack, a member of the Pine Technology Group, as its latest authorized distributor in Canada

Mitsubishi Electronics ***(http://www mitsubishi-mobile com)***
Co developers with HP of radical notebook technology, Mitsubishi has unveiled its new Pedion notebooks in the U S Mitsubishi also makes the AMiTY CN 2 4 pound mini notebook PC (which is the size of an appointment book), aimed at the most highly mobile computer users It is unclear what Mitsubishi will do with these product lines in Canada but if it decides to enter this market, its reputation for quality may open some doors for Canadian Pedion and AMiTY dealers

Acer ***(http://www acer com)***
Acer's Extensa and TravelMate notebooks are regularly updated, and constitute a highly competitive brand name For example the TravelMate

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- RTC timer to power on or wake up the system
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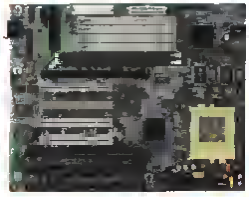
- ATX form factor

586ITBD

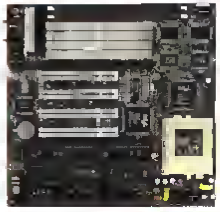
Intel® 430TX BAT System Board



- Supports ACPI specification
- OS Directed power management
- Ultra synchronous DMA mode - 33MB/sec
- Supports Modem Wake-Up/Ring-On
- RTC timer to power on or wake-up the system
- Monitors processor temperature, power voltages and processor fan control

586IPVG

Intel® 430VX BAT System Board



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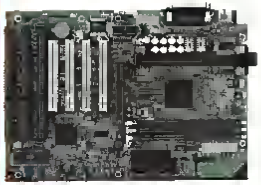

- Accelerated Graphics Port (AGP)
- Supports ACPI specification
- Ultra synchronous DMA mode 33MB/sec
- Supports Modem Wake Up/Ring-On
- RTC timer to power on or wake-up the system
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such as Pentium chips, hard drives and CD-ROM drives There is usually about a six-month delay between the appearance of a new Intel processor for desktop PCs and the release of the low-power version for notebooks.

The Standard Notebook In 1998

The 486 processor disappeared from the notebook market in 1997, and few notebooks are available with less than a Pentium 120 chip Apple boasts, correctly, that it has the fastest processors, with its new G3 chips Some vendors, including Compaq, offer 'clone' chips from AMD for budget-minded customers, but Intel still has about 90 per cent of the total notebook CPU market, even taking Apple's PowerBook share into account Standard RAM is at least 16MB — the minimum to run Windows 95, while 32MB of RAM is the minimum for comfortable multitasking

Since most current Windows software comes on CD-ROM, CD drives are now usual on notebooks Some models offer swappable floppy and CD-ROM drives, and even mass storage cartridge drives, all sharing the same drive bay DVD-ROM drives are widely available as a premium option on high end models from Toshiba, IBM and others If DVD really catches on this year, it may start appearing on mid-priced notebooks by the end of the year Graphic chipsets are more comparable to desktop PCs, with the meager 512K of VRAM having been replaced by 2MB, 4MB or more graphics memory Hard drives under 1GB are rare, power users can now choose up to 8GB of internal hard drive storage

Screen size continues to increase, up to 15 1 inches with brighter and more easily viewable active-matrix screens becoming available There is still an active debate over the merits of internal modems versus PC Card modems and network interface cards most internal modems are now 33 6 Kbps

The debate over pointing devices still rages touch pads versus the IBM TrackPoint style 'eraserhead' cursor control

Form Factor?

The form factor of notebooks has continued to spread At the upper end, Eurocom has created notebooks that are closer in size to small briefcases, the better to accommodate a 15 1-inch screen and a full-sized keyboard The other, larger trend is towards smaller, or at least thinner HP has just unveiled its new metal-skinned, ultra-thin line of notebooks, following IBM's lead of a year ago in offering extreme thin-line (one-inch or less thick) models HP has also found that recent price drops have boosted the appeal of its durable OmniBook 800, a very small, light mobile utility notebook with an unusually shaped, miniature screen

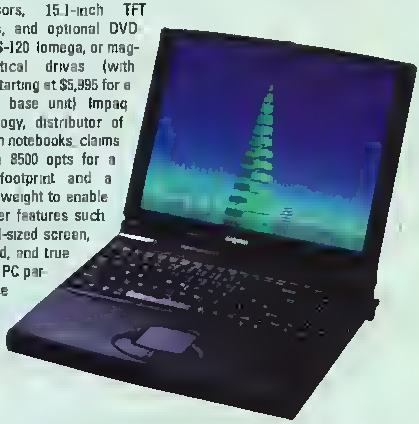
7100 offers 200MHz, 233MHz or 266MHz Pentium MMX processors, 32MB of SDRAM expandable to 128MB and up to eight hours of battery life from one lithium ion battery pack.

NEC ***(http://www.necteck.com)***
NEC Technologies was an early leader in introducing low-cost active-matrix displays to the notebook market and according to some industry analysts, has about a 7 5 per cent share of the 1997 market. NEC recently hired the well-known Tod Rehm, who helped establish Toshiba as the leader in the Canadian notebook industry, so NEC will be worth watching in 1998 NEC also markets the MobilePro CE handheld personal computer

GVC ***(http://www.gvc.ca)***
At the end of January, GVC announced its 758 series of notebooks, aimed at the mobile worker who wants to choose a competitively priced (from $3,499) medium weight (7 5 pounds) notebook configurable from 'utility' configurations up to respectably high powers (up to 233MHz Pentium, 14 1 inch TFT)

Sharp ***(http://www.sharp.ca)***
Sharp, one of the principal vendors of flat screens for products ranging from pocket organizers to notebooks to flat-panel monitors, is attempting to regain a prominent position in the North American notebook market after having withdrawn from selling notebooks here several years ago Sharp has begun manufacturing a wide range of notebook models, including a PC 3000 and 9000 'value' line, the W 100 WideNote line, and a PC Performance line Complementing the notebook line are a wide array of handheld devices, ranging from electronic organizers, to the Zaurus PDA, to the new Mobilon handheld PC

Eurocom ***(http://www.eurocom.ca)***
The only Canadian notebook maker among the top 10 Canadian notebook vendors, Eurocom has developed a good reputation based on building reliable notebooks with absolutely up to the minute components The current top of the line Eurocom 8500 SuperNotebook offers up to 300MHz Intel or AMD processors, 15 1-inch TFT screens, and optional DVD RDM, LS-120 Iomega, or magneto-optical drives (with prices starting at $5,995 for a 15 MHz base unit) Impaq Technology, distributor of Eurocom notebooks claims that the 8500 opts for a larger footprint and a heavier weight to enable it to offer features such as a full-sized screen, keyboard, and true desktop PC performance

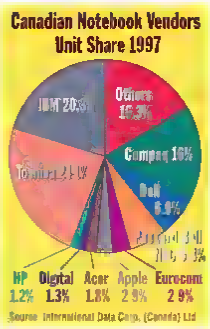


Toshiba's Libretto handheld PC, at just under two pounds, has also found a market for a notebook with full Office 97 compatibility in an extremely light design. The Apple E-Mate 300 blurred the border between notebook and handheld PC in 1997, offering a decent keyboard and (monochrome) screen built over Newton MessagePad innards. Microsoft's CE platform, though not wildly successful, did include some capable examples of near-notebook feature sets, as in the HP 200 LX and the Philips Velo. Now NEC plans to release a larger form-factor CE 2.0 device in April with the color-screened MobilePro 750, to be priced at $1,499.

The big story in mobile computing, however, was the runaway success of the 3Com PalmPilot, a truly handheld device that made no pretense of being an imitation or desktop PC. The PalmPilot has become popular because it does a few very useful things (contact management, scheduling, even E-mail) simply and cheaply. The handheld devices still demand that their users have a real computer somewhere, but they allow users to leave them behind much of the time, and still have access to critical data.

There will be a heated struggle between the current Big Three Windows notebook market leaders throughout 1998. Resellers should consider two basic orientations to making a buying decision.

In the corporate notebook market, experience with the hazards of notebook ownership has led most IT managers to place a premium on brand reputation, warranties, and service contracts (especially rapid replacement options). This gives a definite competitive edge to the traditional major players, Toshiba, IBM and Compaq.



In the SOHO market, there is still a price-sensitive orientation towards high value, good feature sets at lower prices. This allows vendors who differentiate themselves on price or leading edge components to find buyers. Compaq, for example, has launched a Presario value line of notebooks, some of which use AMD processors, and which don't feature the same degree of built-in connectivity and network management as the Armada line.

Toshiba and IBM offer value notebook lines composed of in effect 'last year's notebooks' — deeply discounted notebooks with older components and feature sets.

At a certain price, any notebook will sell. As AST could testify, however, a healthy product line has to contain a full spectrum of products, from premium dream machine to remainder bin bargain.

To complicate matters further, there is an increasing trend in the industry towards 'disintermediation,' dispensing with resellers altogether. This trend was started by Dell and furthered by Gateway 2000, but has sparked a general movement among all vendors for at least 'build-to-order' programs, if not full-blown direct sales.

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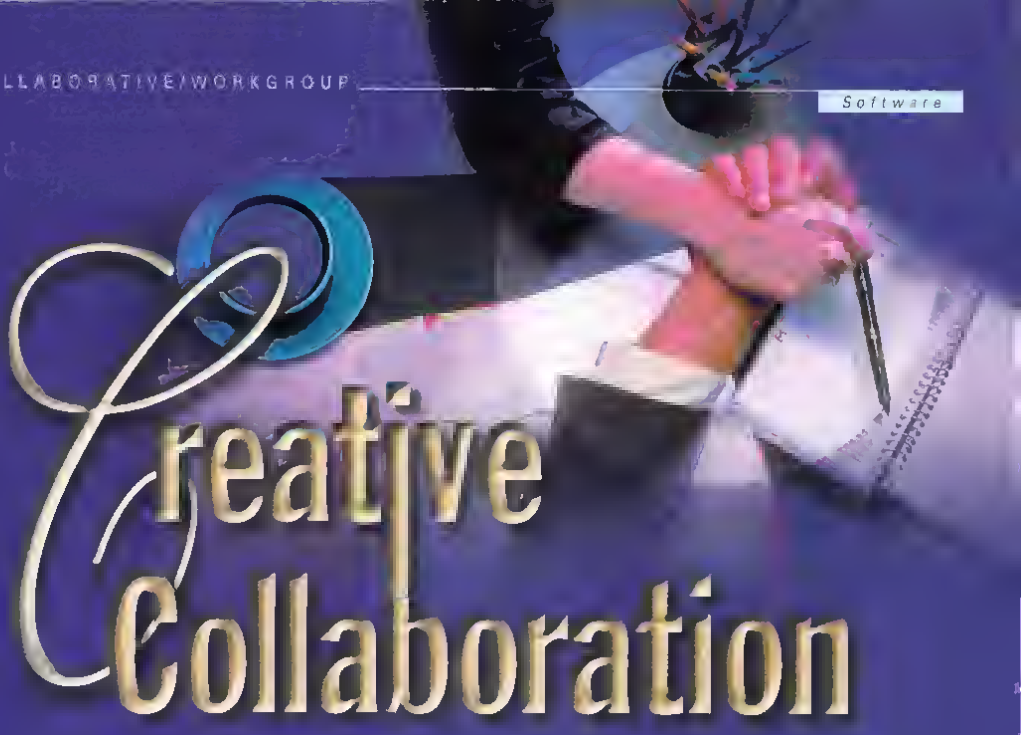


Creative Collaboration

Or, Making The Whole Greater Than The Sum Of Its Parts

by Paul Lima

Collaboration.
Synergy.
The left hand knowing what the right hand is doing.
Close to the customer.

While information technolnjy cannot save a sinking ship, employees of well-managed companies can use IT to collaborate, work in a synergistic manner, co-ordinate all hands and stay close to the customer

"An organization with direct access to information about their products and services, and direct access to their supply chain, can provide a better service," says Nelson Ruest director, Resolutions Enterprises, in Sherbrooke, Que Informed customers make enlightened choices, and personnel can provide them with better solutions

"Collaborative/workgroup software serves to put these elements together," and competition and speed to market have fuelled the need for greater collaboration, says Jamey Simzer, director, channel sales for Novell Canada Inc. in Markham, Ont. "As companies are becoming smaller and are pressured to deliver more to their customers, speed of delivery can only be accomplished through more efficient processes. Communication is the key to the success of the processes whether that is sending E-mail to a group, managing tasks or the ability to electronically schedule multiple people across the country in a single message."

Groupware "is a natural progress of E-mail and the network," says Issie Rabinovitch, a Toronto-based computer technology consultant "People wanted to exploit their networks, to move beyond sharing peripherals but the basic issues of the network needed to be resolved before resellers could add the value of groupware."

While networks put the required elements for collaboration in place "the required infrastructure was not in place to facilitate it," says Peter Carrescia, national technology manager, for Lotus Development Canada Ltd in Toronto

Carrescia points out that many organizations collaborated using voice mail, faxes and letters but these systems "became increasingly problematic as more complex processes needed to be tackled [and] extended to customers and suppliers "

Once people had access to E-mail, they saw the potential of threaded discussions, public folders, access to schedules, sequential E-mail routing lists and other features that are standard in groupware application such as Lotus Notes, Microsoft Exchange Server GoldMine contact manager, Novell's GroupWise, FirstClass, and other applications, says Rabinovitch

Considering that internal E-mail on networks or Internet E-mail to the desktop is reaching a critical mass — there is tremendous room for growth in the groupware market But that begs the questions who is the target market?

"At its most basic, collaborative software would include the function of E-mail This is a type of application that is universally used across an organization," says Carrescia

The Toronto Star recently reported that 2 7 trillion E-mails would be sent in 1997, a number estimated to grow to 6 9 trillion by 2000

"As the most common form of workgroup software, E-mail is now moving towards more structured activities like document collaboration, and instant groupware," says Lesley Paul, product manager for Exchange Server at Microsoft Canada

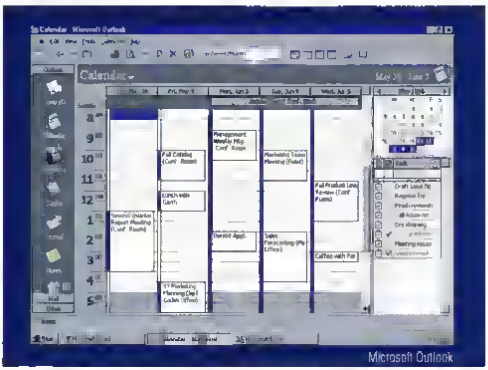
Two important trends have occurred in the last two years around collaborative software, says Carrescia Collaborative application interfaces (design and graphics) have matured, allowing users to work in a more intuitive manner and applications have become more interactive "Whether through multimedia or dynamic personalization of a site, users are more drawn into an application now than ever before "

The Market

"The more collaborative environments are ones in which the paths to goals have to be invented by the group," says David Weinberger, editor of the *Journal of the Hyperlinked Organization* in Brookline, Mass. "These tend not to be highly regulated or highly automated environments They do tend to be found more regularly in engineering, sales, human resources and marketing "

"Collaboration usually affects the entire company but began in workgroup functions High-tech companies and high service companies are the greatest users of collaboration technology," says Simzer

Ian Galbraith, public relations manager for Seagate Software Inc., goes much further "All companies can use workgroup software All



companies have databases/data warehouses containing information Companies need the tools to be able to access, analyze, and add value to that information in a timely fashion "

Value-Added Services

So there is a market and a need and the infrastructure is in place But what's in it for VARs? The answer is hardware and software sales, application customization and training

Reseller opportunities include "integration with existing or outdated systems through a variety of gateways, integration with fax and imaging solutions as well as business process engineering through the advancements in work-flow management," says Simzer

Ruest says VARs and systems integrators should exploit the opportunities both for their sake and for the sake of the customer "The advantage of working with these new technologies is that everything is reusable The same programming languages are used over and over, thus knowledge is accumulated Customers come to us for expertise The more projects we are involved in the more experience we gain"

> *"Security is a key factor when implementing an information sharing software application [and] fault tolerance is key when several queries are being sent to a server at once."*
> *— Ian Galbraith*

Resellers should not oversell groupware solutions. "Getting an application with more features than you need is not a good idea," says Rabinovitch, so neither is selling customers more than they need. "Lotus Notes is remarkably capable in the right hands and if the client needs Notes, then this is where the VAR comes in. The application has to be customized and users must be trained." But if all the user wants is E-mail, just sell E-mail, he advises or you will frustrate your clients.

Ruest agrees. "Like all projects, the first phase is a needs analysis."

It's the VAR's job to help customers find out what they need.

Combined with Microsoft Outlook, Microsoft Exchange allows ISVs and VARs "to address an organization's immediate E-mail and document collaboration needs right out of the box. The Instant Groupware feature brings that same ease of use to the increasingly structured, and increasingly popular, groupware category," says Microsoft.

Simzer says customers should look to products, like Novell's GroupWise, "that not only provide E-mail services but integrate E-mail, calendaring/scheduling, task management, document management, work-flow, and remote and Web access services."

> *"As companies are becoming smaller and are pressured to deliver more to their customers, speed of delivery can only be accomplished through more efficient processes."*
> *— Jamie Simzer*

The Internal Web

When it comes time to put a collaborative system together, analysts say organizations are better off using intranet technologies.

"Intranets let people work together in new ways. The technology is creating the ability. The ability is creating the need," says Weinberger.

Most software vendors have been moving to an integrated software model. Tools such as Visual Basic, HTML, ActiveX and Java make development simple and reusable. Since most products today support one or the other of these programming tools, whatever the manufacturer, "VARs and SIs can clearly profit from this standardization," says Ruest.

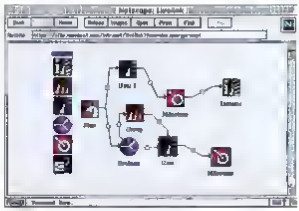
Lotus believes that a collaborative platform, such as Domino, should support the different classes of collaborative applications without using different software applications for different types of collaboration, says Carrescia. A "stovepipe approach to collaboration" creates impediments to the sharing of information between collaborative applications, "which was the kind of the problem that collaborative software was supposed to solve."

VARs and SIs should also build in scalability. "You don't want it to fail if it succeeds," says Weinberger. He warns that organizations should not just move the old hierarchical ways of working onto a new medium. "The collaborative software should be designed to leverage the power and ethos of the Web," which he describes as decentralization, ubiquity, anti-authoritarianism. He is a "big fan" of Livelink from Open Text, an application he says meets the criteria.

Clearnet Communications Inc., a digital wireless communications services provider, chose Open Text's Livelink Intranet as its enterprise application standard for managing knowledge across the company. "Our shared hard drives were a data jungle, there were too many versions of documents available, hampering our ability to access information and share knowledge," says Jackie Puchalski, Clearnet's director, corporate information systems. "Deploying Livelink Intranet enables us to work across different departments and platforms, managing our documents, collaborating on projects and harnessing the knowledge that was previously so widely distributed across the corporate knowledge base [and] the ability to add users via the browser also presents big savings not only in training, but also in desktop maintenance."

Beyond scalability, resellers must consider security, fault tolerance and information sharing. "Security is a key factor when implementing an information sharing software application [and] fault tolerance is key when several queries are being sent to a server at once," says Seagate's Galbraith.

While groupware applications can be used to stretch work forces throughout a building, across a continent or around the world and keep them working together, they can also be used to train the workforce. Over the next four to five years, "the ability to achieve and maintain a highly skilled workforce will become one of the primary competitive strategies pursued by Canadian corporations," according to a report published by International Data Corp. (IDC) Canada Ltd.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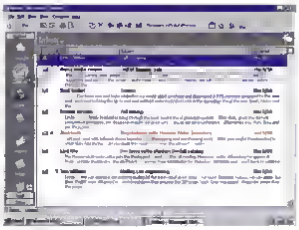
GroupWise 5


Microsoft Outlook

As corporations transform themselves into what IDC calls "learning organizations," they will turn to service firms to assist in the development of learning processes and strategies "with a focus on E-Learning."

With collaboration now part of the corporate work-style, VARs should be able to use the sale of collaborative applications to expand markets and increase revenue opportunities for some time to come. CCW

Paul Lima is a Toronto-based journalist who specializes in high technology. He can be reached at tiko@idirect.com

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E-mail management, security is crucial

by Geof Wheelwright

As electronic mail becomes the dominant medium for written communication between employees and outside customers, concern is growing about the tools needed to manage electronic mail. As well, there's a need to protect users from E-mail-borne viruses (particularly macro viruses in spreadsheet and word-processed files).

So implementing and managing corporate electronic mail services has become a huge strategic issue for many companies. And it leads to a number of issues — with almost more questions than answers. These include

- What should E-mail be used for?
- Should employees be encouraged to give out their E-mail addresses to all and sundry — or should they be required to limit their E-mail traffic to essential business contacts?
- Who owns the E-mail?
- Who has the right to look at anyone else's E-mail?
- How is external and Internet mail handled?
- Are file attachments permitted?
- If a file attachment contains a software virus, who is responsible for ensuring that it doesn't spread to other systems on the network?
- What preventative measures are taken to ensure that files containing viruses never get opened?

Is It Too Big?

There are also network resource issues. Suppose, for example, you have within your company some bright young spark who designs a 1MB PowerPoint presentation that he feels he just *has* to share with 20 of his closest colleagues via E-mail.

Leave aside for a moment the question of whether or not such a presentation might more properly be posted on an internal company "intranet" site. The fact is that a poorly-designed E-mail system would

cause that single E-mail to use more than 20MB of hard disk space within the company as it is copied onto each of user's local hard disk.

A good E-mail system would offer the choice of copying the file to the local hard disk with each file send — or instead just including within the E-mail a pointer to the file's location on the network. The pointer would take the form of a Web-style "link" that would instantly open the presentation when it was clicked.

The first issue, for many users, however, is just the business of properly managing which E-mail goes where. Some people get hundreds of electronic mail messages a day. With the volume of information coming at them, they face great difficulty sorting the urgent messages (to which an immediate reply is often needed) from "broadcast" electronic memos sent to everyone in the company. The latter do not generally require a reply and can sometimes be digested on a more leisurely timetable.

> *"Unfortunately, E-mail attachments are the greatest virus threat to most corporations due to the rapid spread of macro viruses and the lack of tools to detect viruses in this environment."*
> — *Irfan Salim*

What Did You Put In The Mail?

It also appears corporate computer users are increasingly becoming concerned about the file attachments they are receiving in electronic mail files. Particularly since the proliferation of "macro" viruses that have infected Microsoft Word and Excel files (two of the most common types of file to attach in an E-mail message), some companies in Canada are having all incoming E-mail attachments inspected for viruses before they are opened. Others are simply banning attachments altogether.

One of the problems thus far has been that users do not know they have an infected file until they open it. And by then, it is usually too late as the virus infects the computer's hard disk from the moment it is opened.

Macro viruses also do not typically create so many problems that it renders the computer unusable — they just make it more frustrating to use than it already is.

This kind of irritation might, for example, take the form of saving files incorrectly or not allowing one to open certain types of files. It does, however, mean that users will often unknowingly continue to use their systems after they have been infected with a macro virus. This virus will often then infect many other documents — and users will send out E-mail attachments containing those infected documents, thereby further propagating the virus.

Cupertino, Calif.-based Trend Micro Inc. has thus found a huge market for a recently-introduced product designed to detect virus-infected files within electronic mail attachments.

> *"In an attempt to control viruses hidden in E-mail attachments, many companies restrict the use of Internet E-mail or prohibit the use of message attachments."*
> — *Cathy Munn*

"Unfortunately, E-mail attachments are the greatest virus threat to most corporations due to the rapid spread of macro viruses and the lack of tools to detect viruses in this environment," explained Trend Micro's U.S. president Irfan Salim.

The company's InterScan VirusWall scans SMTP E-mail attachments, HTTP Web downloads and FTP file transfers. It is also supposed to block Java applets, Active X controls and software that is not "signed" or recognized by the Authenticode Internet protocol as originating from a commercial software supplier. Trend Micro currently offers versions of InterScan VirusWall for the Windows NT, Solaris and HP-UX operating systems and has a version of IBM's AIX operating system under development.

According to one of Trend Micro's latest customers, the problem of electronic mail-borne viruses has become so bad that many corporate users are simply unwilling to open mail that has an attached document. Cathy Munn, president of the Vancouver-based Electric Mail Co. Inc., says demand for a product or service that will scan E-mail messages for viruses has really "heated up" over the past year and that her company has licensed Trend Micro's software to meet that demand.

"In an attempt to control viruses hidden in E-mail attachments, many companies restrict the use of Internet E-mail or prohibit the use of

message attachments," observed Munn "Companies need an effective means of preventing viruses from ever reaching their organization while taking advantage of the business benefits of Internet E-mail."

The Electric Mail Co., whose North American customers include large firms such Panasonic, Campbell Soup and the Delta Hotels and Resorts chain, has therefore launched a service called E-mmunity that uses the Trend Micro software to scan all incoming electronic mail before it enters a customer's electronic mail system The service costs US$35 per month for virus protection on the electronic mail of up to 30 users

When an organization subscribes to E-mmunity, all E-mail addressed to their corporate domain name is funneled through Electric Mail's E-mmunity Mail Relay System where Internet E-mail attachments are scanned The company says any infected or suspect attachments are then destroyed and a "warning of infection" notice is inserted in the E-mail message and sent on to the intended recipient If during the scanning process no viruses are detected, the E-mail proceeds directly to the recipient The company says that this all occurs in real time to ensure minimal delays in E-mail transmission.

Munn says that this "minimal delay" is a small price to pay for keeping viruses out of your corporate network

She also says that subscribers to the E-mmunity service may use any Internet E-mail system, or Internet Service Provider, in almost any country world-wide. Munn adds that there are no additional hardware, software or maintenance requirements on the part of the client and that E-mmunity currently scans for more than 7,000 viruses and is continuously updated with new virus strains (about 200 per month). CCW

Geof Wheelwright is a Vancouver-based journalistic who specializes in high-technology reporting. He can be reached at geoffw@wumsey.com

Infowave Wireless sends E-mail over the air waves

A Burnaby, B.C.-based company is pioneering the connection between wireless data communications technology and corporate electronic mail systems Unlike the many ad-hoc cellular connections that some individuals and companies may have experimented with, Infowave Wireless Messaging Inc (http://www.infowave.net/) is aiming to make it easy for users with either handheld or notebook computers to stay in touch with their offices remotely

Last year, for example, the company announced a piece of software that runs on a company's network server solution that is designed to consolidate E-mail from multiple accounts — letting users establish wireless connections without requiring them to have a second E-mail box with a third-party electronic mail provider It is also a real boon for those who, for one reason or another, have multiple electronic mail accounts and need a simple way to check them all at once

Known as Infowave Golden Retriever, it is a Microsoft Windows NT Server-based product which retrieves E-mail on behalf of users from any number of accounts and delivers the mail to any mail box the user specifies. It is designed to "fetch" E-mail on demand and on scheduled intervals from any POP3, Microsoft Exchange, Lotus Notes, Lotus cc Mail, and Novell Groupwise account The company says Golden Retriever will deliver the messages for a user to any internet address or corporate mailbox via landline or wireless network

According to Infowave vice-president Rob Boyko, the key to this product is simplicity "The beauty of Golden Retriever is that it accesses multiple E-mail accounts and deposits all your messages into one in-box on your desktop, laptop, or handheld PC," he says. "We've received a huge number of requests from Internet service providers (ISPs), corporations, wireless service providers and paging companies seeking immediate and convenient access for their electronic messaging users"

Infowave has also been active in promoting access to wireless electronic mail via handheld computers. Late last year, the company announced the completion of a software development effort with Microsoft to create Infowave CE — software which provides wireless access for handheld computers that use the Microsoft Windows CE operating system

The company says this software lets Windows CE users send and receive corporate E-mail, internet E-mail, faxes and receive Web pages — all wirelessly Users do however, have to have Infowave CE as the E-mail "client" and Infowave's Update software on the server — but they can maintain their existing In-Box and Folders

Infowave says it makes client and server software on an OEM basis for about 75 per cent of the wireless service providers in North America including Wynd Communications and DTS Wireless In addition to Microsoft, other "corporate partners" include Megahertz (US Robotics), Cantel/AT&T, Ram Mobile Data, IBM and Ericsson

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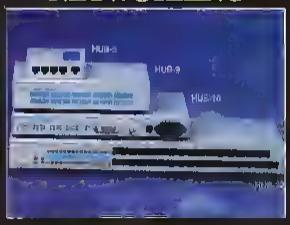

intel DCM 3Com

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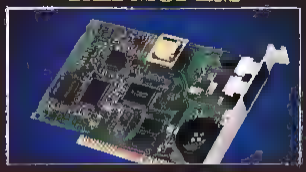

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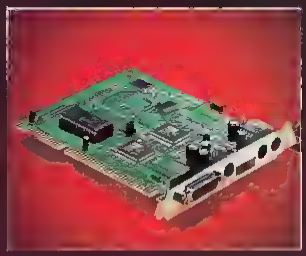

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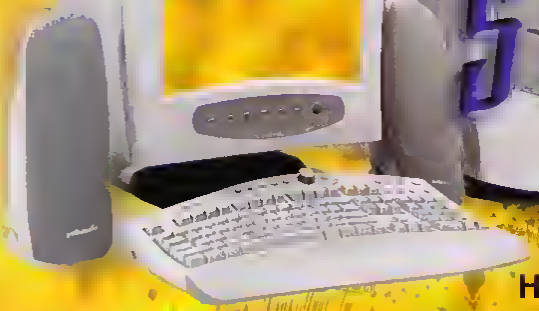
HIGH-END SYSTEMS



High Performance Redefined!

The latest breed of 333MHz power-packed systems push the envelope an computing capability.

by Steve Halinda

One of the most enjoyable things about being involved in the computer industry is watching new technology emerge Without a doubt, some of the most exciting times occur when a giant chip manufacturer announces the availability of a new processor with improved engineering design, lower-power consumption and, of course, higher clock frequencies

It's easy to detect an increased level of excitement in the voices of vendors when we call them up and request that they submit systems for review which make use of these new processors Depending on the timing sometimes it may be extremely difficult for them to obtain the goods, as we found out during this month's system roundup. It generally takes a few solid weeks before a new generation of processors is readily available to system vendors around the country, though some of them are lucky enough to get their hands on them before their competitors Thanks to those manufacturers who went out of their way to provide us with these new speed demons in time for our deadline!

What's New With Pentium II?

On Jan 26, Intel officially announced the newest member of the Pentium II family, the 333MHz version The most notable difference in the new processor is the smaller 0.25-micron process The first three members of the Pentium II line (the 233, 266 and 300MHz units) were all designed with a 0.35-micron process Although the number of transistors remains the same at 7 5 million, the tighter, more compact engineering process allows for higher clock frequencies The physical characteristics of the new processor are also the same as its predecessors, using a 242-pin SEC (Single Edge Contact) design This allows for the processors to be used on most current motherboards that support multiplier settings of 5X

So aside from the smaller fabrication process and the extra 33MHz boost, there's nothing really new about the new processor other than its high price tag Since the latest price cuts by Intel, the 300MHz chips which were selling for around $1,150 are now available on the street for $950 In turn, the new 333MHz variety carries the new four-digit price tags, selling for roughly $1,350 to end-users Although dealer prices are lower, the best value at this time looks to be the 266MHz version of the Pentium II — available for $650 retail However, if your customers are intent on having the latest (not to mention fastest) in processor technology, they will be required to pay a premium For those who are more budget conscious, the extra 33MHz will not be enough to justify the large premium

More Than Just A Processor

It goes without saying that much more goes into a high performance system than just a fast processor The components going into a high-performance PC today are also different than they were just six months ago For starters, we now have IDE hard drives with total capacities exceeding 8GB available to the consumer for just over $500 Although it may seem like

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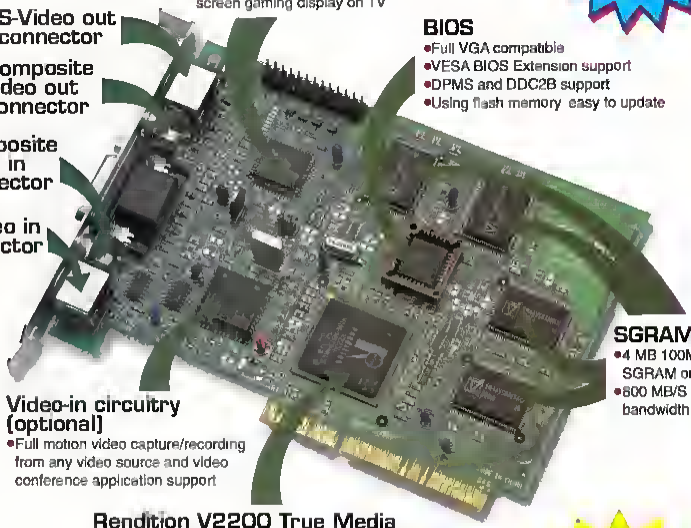

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overkill to most, it's not all that hard to imagine a day in the near future when even this won't be enough. Take a look at most software titles today, be they games or applications, and you'll quickly realize that a "typical install" will take upwards of 250MB. A few modern games on a hard drive can easily exceed 3GB. If you're looking to do a little bit of everything with the PC, the combination of games, productivity and multimedia applications will add up to staggering proportions in no time at all. This holds especially true if the PC is used for video and sound editing where a few minutes of data can take up several hundred megabytes.

New generation video cards are also available, giving your customers more choice than ever when it comes to building their high performance system. Although there is no support yet for AGP video built into the operating system, AGP cards are everywhere, and cost only a few dollars more than their PCI counterparts. Sales of these cards are expected to boom when OS level support is added in the upcoming versions of Windows 98 and NT 5. Aside from the new bus architecture, nearly every major manufacturer is now offering cards with 8MB onboard. The additional onboard RAM allows for faster video performance at higher resolutions, as well as being able to support true color all the way up to 1,600 by 1,200. For the most part, the additional 4MB adds only a small fraction to the cost of the video card, and depending on what the PC's main uses will be, it can be money well spent. Of course, customers have the option to add the additional RAM at any time thanks to the new SIMM-like upgrade modules offered by manufacturers.

Perhaps the single most important decision your customers can make when it comes to getting the most performance from their PCs is adding additional RAM to the system. Since RAM prices are at an incredible all-time low, equipping a system with 64MB of total RAM will only cost an additional $100 over 32MB. The systems we reviewed this month each had 128MB, which is more than adequate for even the most power-hungry users. A large amount of RAM is particularly desirable if the PC is used for editing large image files or sound files, or working with video clips. For non-multitasking environments, a total of 64MB will suffice for both gaming and work-related applications.

No matter what your customers may want in their high performance PCs, it's important that they understand that there is much more to raw performance than processor speed alone. The right combination of hard drive, video card, motherboard and total RAM can often be used to achieve overall higher performance.

Our Tests

We asked vendors to send us machines based on Pentium II 333MHz processors and 128MB of RAM. All other components were left up to the vendor. Although we got fewer submissions than usual, we did get a nice mix of systems, each with their own unique configuration. As usual, we ran the BAPCo Sysmark32 benchmark tests on all machines, which we configured to run in a resolution of 1,024 by 768 at a 32-bit true color depth.

Note: Although the latest generation of higher quality motherboards allows for various bus frequencies to be used beyond 66MHz, all of our tests were conducted at 66MHz. Systems which were configured for 75MHz and 83MHz bus speeds were reconfigured to the maximum supported bus frequency as stated by Intel for use on its 440LX chipset, which is currently 66 MHz. Although it is possible to boost the overall system speed by increasing bus speeds, this practice should be left up to the customer and not preset by the vendor. Technically speaking, overclocking the bus frequency does not automatically overclock the CPU so long as the overall system speed is the same. For example, a 300MHz system can be configured as either 66 by 4.5 or 75 by 4. Likewise, a 333MHz system can be set for either 66 by 5 or 83 by 4. Selling a system to a customer with a higher bus speed may not be illegal, although it can be looked upon as unethical. The chances of system crashes are far more likely with higher bus speeds, and customers who do not have strong technical skills will suffer as a result.

The Contenders

Fastech Compucon

Without a doubt, this month's most uniquely configured system comes from Fastech Computer Ltd. The machine bearing the Compucon label is powered by the brand new Pentium II 333MHz processor, and 128MB of SDRAM all on an ASUS motherboard. The storage system consists of a Seagate 4.5GB UW-SCSI drive using a DPT PM2044UW controller. The LeadTek WinFast L2300 AGP card with 8MB of SGRAM onboard will aid in high-speed graphics even at extreme resolutions. Rounding out the system are components such as a Panasonic 24X CD-ROM drive, an SB AWE64 sound card, a SupraXpress 56Kbps voice/faxmodem and an LS-120 SuperDisk drive. With an overall score of 292 on our benchmarks, this machine is very capable, loaded, and has an estimated street price of $4,650 with a two-year parts and labor warranty.

STD CompuPartner

Known for their excellent price/performance ratio, systems from STD are always a welcome sight in our Lab Test. The system we received this month proved once again that excellent performance doesn't always cost a bundle. Equipped with a Pentium II processor running at 333MHz and 128MB of SDRAM on a MicroStar motherboard, this system has everything a power user could ever ask for, and then some. For high-speed graphics at any resolution, the ATI Xpert@Work AGP card with 4MB of SGRAM onboard will please both the avid gamer or casual user thanks to its Rage Pro chip. The popular Quantum 6.4GB hard drive with UDMA support is also found in this system, offering not only plenty of storage but high-speed access to your data as well. Speaking of data, the Panasonic LS-120 drive is a technology that is finding its way into many systems these days, and will hopefully replace the old 1.44MB floppy drives in the very near future.

Multimedia components in this system consist of a Panasonic 24X CD-ROM drive, a Sound Blaster AWE64 sound card, a pair of multimedia speakers and a USR 56Kbps fax modem. On the software

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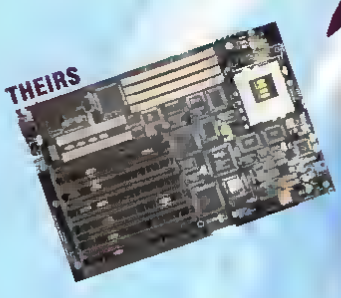

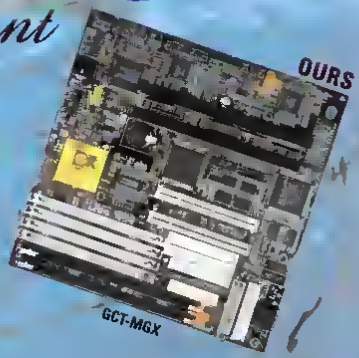

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- ATX/AT POWER coaaactor Oa Board
- Desktop maaagement interface (DMI)/PC 97 Compliant

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3 PCI & 4 PCI

GCT-5T
Intel 430 TX BGA Chipset
2 DIMM & 4 SIMM
3 ISA & 4 PCI

GCT-8T
Intel 430 TX Ch pset
3 DIMM & 2 SIMM (4 Banks)
4 ISA & 4 PCI

GCT-8ST
SIS 5571 Chipset
3 DIMM & 2 SIMM (3 Banks)
3 ISA & 4 PCI

GCT-6iV
Intel 430 VX Chipset
2 DIMM & 4 SIMM
4 ISA & 3 PCI

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side of things, the system includes Norton's AntiVirus and the Intel LanDesk Client Manager. With an estimated street price of $2,999 and a three-year parts and labor warranty, this system is without a doubt the best value in town.

ELCO

This system completely took us by surprise. Upon reading over the enclosed specification sheet, the first thing that came to mind was that someone must've made a mistake somewhere. But it's no mistake, and yes, it's a complete package including a 300MHz Pentium II processor, 128MB of SDRAM, a 3Dlabs Picasso AGP card with 8MB onboard, a Fujitsu 3.2GB hard drive, a Liteon 24X CD-ROM drive and a Sound Blaster AWE64 sound card. Oh, and there's also a 56Kbps modem to top it all off. True, the hard drive isn't exactly the biggest, and the modem may not be a USR, but for $2,000 what more can you ask for?

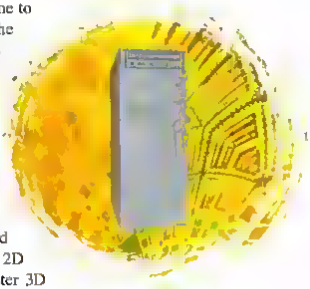
Hewlett-Packard Pavilion 8280

The latest addition to the popular Pavilion line by HP is the model 8280. It makes use of the very latest technology and includes components such as the Pentium II 333MHz processor, 64MB of SDRAM, a roomy 8GB hard drive, Hitachi DVD drive, a 4MB ATI AGP graphics card with 4MB of SGRAM onboard as well as TV output, and a 56Kbps modem based on Flex technology. The package also includes a generous amount of software such as Microsoft Works, Microsoft Money '97, Quicken Basic by Intuit, DayTimer HomeLife by Starfish Software, HP Financial Calculator, Microsoft Picture It, Microsoft Greetings Workshop, Howdy by Alta Vista, EasyPhoto by Storm Software, Connections by Discovery Channel (DVD), Microsoft Encarta 98 Encyclopedia, Reader Rabbit 2, Ultimate Writing & Creativity, Operation Neptune, Hollywood Studios DVD Sampler from Warner, and a slew of on-line service trial offers such as AOL, Prodigy and Compuserve. As an added bonus for registering electronically, the buyer gets SimCity 2000 by Maxis.

LCF Technology INET

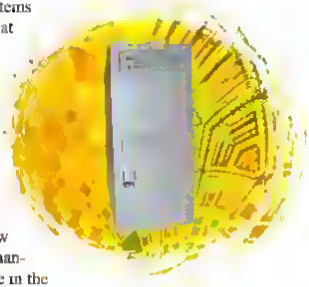
From LCF Technology in Richmond, B.C., comes this INET system, loaded with some of the very latest technology the industry has to offer. To start off, we have the new 333MHz Pentium II processor backed by 128MB of SDRAM, a Quantum 4.3GB UDMA hard drive for storage, and a Diamond Viper V330 AGP video card with 4MB onboard for super-fast video. Instead of the usual CD-ROM drives found in most other systems, this machine was equipped with the very latest DVD technology, a Creative Labs Dxr2 DVD drive. For excellent sound reproduction, there's the very popular Sound Blaster AWE64, also from Creative Labs. A USR 56Kbps voice/fax modem is included for instant communications right out of the box. To take advantage of the latest in processor and graphics technology, two games are included with this machine which require a Pentium II processor and AGP video card to work properly — DVD Basket and Beanstack, and Redline Racer. With a street price of $3,370, this system offers a little bit of everything for the intermediate and even power-hungry individual.

Edge KTX



Systems with the KTX label came to us from Edge Computer Ltd. The configuration used to build this machine is every power user's dream. To start off, we have the latest Pentium II processor from Intel running at 333MHz and 128MB of SDRAM. The system includes an excellent video subsystem consisting of a Matrox Millennium II PCI card with 8MB onboard for superior 2D graphics, and a Diamond Monster 3D for use in the latest 3D games. A Seagate 4.5GB Ultra SCSI hard drive is used as the primary storage device, coupled with an Adaptec 2940UW controller. Multimedia components include a Mitsumi 32X CD-ROM drive and a Sound Blaster AWE64 sound card. On the software side of things, the package includes the Microsoft Home Essentials bundle consisting of Microsoft Word 97, Works 97, Publisher, and Bookshelf. Priced to resellers at $3,790, this KTX system comes with a two-year parts and labor warranty.

Ultinet



When it comes to building systems that perform amazingly well at highly competitive prices, Ultinet Computer Corp. has the process down to an art form. The system we received this month was loaded from top to bottom with nothing but the very best components the computer industry has to offer. Although the processor in the machine was not the new 333MHz variety, this system managed to achieve the highest score in the entire roundup on its 300MHz chip. The system is configured with 128MB of SDRAM, a Matrox Millennium II PCI video card with 8MB of WRAM, a brand new 8.4GB Quantum Fireball SE hard drive with UDMA support, a Panasonic 24X CD-ROM drive, an LS-120 drive, and a USR 56Kbps voice/fax modem. An SB AWE64 sound card and 120-watt speakers will enhance the multimedia experience from included software titles such as Compton's Encyclopedia and 50 other packaged titles, or you can choose a seven-title mini-office suite. With an estimated selling price of $3,099, this machine comes with a two-year parts and five-year labor warranty.

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CD-R Drives

Mar 96

	Fastech Compucon	STD CompuPartner	ELCO
Processor	Pentium II 333MHz	Pentium II 333MHz	Pentium II 300MHz
RAM	128MB SDRAM	128MB SDRAM	128MB SDRAM
Video Card	LeadTek L2300 AGP	ATI Xpert@Work AGP	3Dlabs Picasso AGP
Video Memory	8MB SGRAM	4MB SGRAM	8MB SGRAM
Monitor	None	None	None
Sound Card	SB AWE64	SB AWE64	SB AWE64
Hard Drive	Seagate 4.5GB UW-SCSI	Quantum 6.4GB UDMA	Fujitsu 3.2GB UDMA
CD-ROM Drive	Panasonic 24X	Panasonic 24x	Liteon 24X
Modem	SupraXpress 56K	USR 56K	Harmony 56Kbps
System BIOS	Award	AMI	Award
Operating System	Windows 95	Windows 95	Windows 95
Extras	LS-120 drive OPT UW-SCSI controller 180W speakers	LS-120 drive Multimedia speakers	
BAPCo Benchmarks			
Desktop Publishing	277	320	305
Desktop Graphics	557	517	513
Desktop Presentation	294	271	271
Word Processing	275	286	293
Spreadsheet	280	313	296
Database	283	338	336
Sysmark 32	292	306	303
Contact	(604) 279-9646	1-800-463-6783	(905) 470-7301
Internet contact	www.compucon.com	www.std.net	www.elco.sys
Street Price	$4,650	$2,999	$2,216
Reseller Price		$3,150	$2,000
Warranty (# of years labor, parts)	2L, 2P	3L, 3P	2L, 2P

Performance

Ultinet

Considering it runs at 300MHz and outperformed others with 333MHz processors, this one is a no-brainer

Price/Performance

ELCO

It may not have all the latest gadgets, but it's a complete 300MHz Pentium II system for $2,000. No, it's not a typo

Mar 98 Hewlett-Packard Pavilion 8280	LCF Technology INET	Edge KTX	Mar 98 Ultinet
Pentium II 333MHz	Pentium II 333MHz	Pentium II 333MHz	Pentium II 300MHz
64MB SDRAM	128MB SDRAM	128MB SDRAM	128MB SDRAM
ATI Xpert@Play AGP	Diamond Viper V330 AGP	Matrox Millennium II PCI	Matrox Millennium II PCI
4MB SGRAM	4MB	8MB WRAM	8MB WRAM
None	None	None	None
Ensoniq 3D	SB AWE64	SB AWE64	SB AWE64
Maxtor	Quantum	Seagate	Quantum
8GB UDMA	4.3GB UDMA	4.5GB U-SCSI	8.4GB UDMA
Hitachi DVD	Creative DVD	Mitsumi 32X	Panasonic 24X
K56Flex	USR 56K	None	USR 56K
Phoenix	Award	Award	AMI
Windows 95	Windows 95	Windows 95	Windows 95
Multimedia speakers		LS-120 drive Adaptec 2940UW controller Diamond Monster 3D	LS-120 drive 120W speakers Microphone
215	302	313	308
465	558	557	566
212	241	260	257
226	283	288	296
263	297	301	325
254	303	285	332
244	289	294	309
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$3,499	$3,370	$4,360	$3,199
		$3,790	$3,099
		2L, 2P	5L, 2P

Overall

HP Pavilion 8280

The all-new Pavilion 8280 uses the latest technology, has good performance, and comes with a slew of software unmatched by any of its competitors CCW

Steve Halinda is Lab Test Editor for Canadian Computer Wholesaler. He can be reached at steve@tcpon.com

Computer Telephany

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by Paul Weinberg

"The choice for resellers is either to stay as a computer VAR or extend their knowledge."

— Jacob Gordon

We've been promised many times that computer telephony is about to explode.

Consultant Jacob Gordon affirms the market is poised for big things. The president of Toronto-based VoicePower says recent innovations in CTI in multimedia call centres, Internet telephony, unified messaging, help desk, speech technologies and, most importantly, the joining of forces by Microsoft and Nortel (Northern Telecom) augurs in new possibilities at last.

Gordon is the organizer of the May CTI World '98 Conference and Exposition in Toronto, where Microsoft and Nortel planned to demonstrate Nortel's Symposium call centre product on Microsoft's Windows NT server operating system platform.

As the information technology and telecommunications functions within many enterprises begin to converge, and vendors like Microsoft and Nortel start offering "a common story" in their marketing, states Gordon, "resellers will have the opportunity to leverage existing relationships with customers."

Call centres, the most salable portion of CTI, are still too vertical a market for most VARs. Some of the solutions start at about $4,000. But Gordon is confident this will change now that Microsoft has started to take this field more seriously. Both Microsoft and Nortel are developing partnerships with PC resellers, which would include the training of staff for the new products. Recently available CTI applications, combining software and a server, are the glue that finally let computers and telephone systems talk to each other within the enterprise. "The choice for resellers is either to stay as a computer VAR or extend their knowledge."

Because a fair amount of customization will be required in any adoption of CTI within a networked environment, the role of the reseller for specific vertical markets like retail and the financial services will surely be crucial, says Gordon.

How this will practically work for the PC reseller, already expending great funds in the training of staff in the latest computer technologies, is still unclear.

In CTI, organizations can either purchase all the equipment and software and have call centres set up on their premises. This is called a customer premise equipment solution. Or much like obtaining access to the Web through an Internet service provider, businesses could set up a call centre through the services offered by one of the telephone companies. The second scenario is a less expensive solution and more likely to be adopted by small-and-medium companies. Gordon says resellers should be able to get involved in either scenario.

But Nortel's manager for Symposium, Dorothy MacNeil, states quite firmly that in non-customer premise equipment solutions the service will be offered entirely by the telco, as part of its suite of applications. "There is no role for the reseller."

Maybe the confusion lies in the fact that in telecommunications, resellers play a more limited role, compared to their counterparts in the PC industry. The typical Nortel reseller who sells phone systems, PBX switches, and other products, says PC channels expert Bob Pritchard, is handling a technology "that is not very complex and is plug-in-and-play." On the other hand, a true computer VAR offers services and custom development. Another difference, according to the president of the Kingston-based R.J. Pritchard & Associates, is that in telecom, the reseller must spend a lot of time talking to individual users within an enterprise in order to determine the appropriate telephone system for their jobs. In contrast, PC resellers do little of that and are notoriously more adept at communicating with their motherboards than with human beings.

In PC resellers' favor is the fact they participate in an industry where open standards are the norm, largely because of the ubiquity of the networks. The arrival of the Internet has only reinforced that trend.

But the complete opposite is the case within telecommunications where each manufacturer carries its own proprietary brand of telephone switches. Nortel, for instance, is always battling companies developing compatible products, says Pritchard. Also, in any merging of organizations or reorganization, "you might have two different kinds of equipment, but you can't roll two phone systems together."

Nortel's MacNeil was asked about this standards issue but her only reply was, "I have no comment on the equipment of competitors."

In addition, despite the publicity surrounding convergence, information technology and telephone systems are purchased by different people within the enterprise. "Resellers find they have to make two sets of sales calls," adds Pritchard.

How products are bought in either solitude also varies, says David Curley, vice-president of product marketing and communication at the Kanata, Ont.-based telephone switch manufacturer, Mitel Corp. While cost and resource management figure prominently in the buying decisions surrounding telecommunications in the corporate market, he notes, "it is hard to quantify savings" with the adoption of computer systems.

What all this comes down to is that few companies on either side of the computer/telecom divide "really understand each other's business," says John Schumacher, vice-president for business development at the Toronto-based CTI developer, Genesys Laboratories Canada Inc. But he dismisses the Microsoft/Nortel announcement as nothing more than a marketing agreement. Nonetheless once the roadblocks have been removed in terms of corporate cultures, he is optimistic that CTI will usher in new levels of customer service in the call centre market. The technology exists, for instance, to segment and identify callers considered part of the core clientele for a company and give them specialized services, not available to others. "It will be a huge opportunity for resellers with database skills."

Watching the slow and painful dance between the PC and telecom people, the comments of theorist Marshall McLuhan come to mind. In the PC world we normally think of "interface" as the physical connection between two processes. But the communications seer, writing before personal computers were even invented in 1951, relies on a more complex definition used in chemistry. "Interface refers to the interaction of substances in a kind of mutual irritation," he wrote.

The mutual irritation will have to continue for a while. It is not likely that we will see the formal merging of computers and telephones anytime soon for the broad market of home and business consumers, even though technology exists to make that possible. Economies still dictate that it is still cheaper for the majority of people to own a telephone than a PC. CW

Paul Weinberg is a Toronto journalist who specializes in high-technology reporting. He can be reached at pweinbg@interlog.com

Canada's Eurocom sees success in notebook niche

by Michele McLean

A pub-textured desktop computer packed into a notebook form-factor is a hot seller, asserts Eurocom Corp., the Canadian computer manufacturer. By bringing or enticing people's attitudes about notebooks — by enticing desktop users to switch from their PCs to portable products that feature full desktop functionality — Eurocom notebooks replace the desktop at work, the desktop at home and the travelling notebook in a traveller, said Alain Bard, vice-president of marketing for Eurocom.

"We have a different focus on desktop replacement notebooks and we provide extremely good service and support for customers," added Mark Bialic, founder and president of Eurocom.

Eurocom is the only Canadian company to crack the top 10 in notebook sales in the country. The company tied for sixth in notebook sales in Canada last year with a 2.9 per cent market share, according to market researchers International Data Corp. (Canada) Ltd. in Toronto. George Bulat, manager of PC research with IDC Canada, estimated that the privately owned Eurocom had revenues of $50 million and that the company sold approximately 11,000 units in Canada last year.

"We expect to double our notebook sales over the next 12 months," Bialic said. "Our sales are going up 30 (per cent) to 50 per cent yearly. That's an indication of our success."

In fact, Bialic said Eurocom is looking to increase its sales in the United States and the company hopes to open an office south of the border as early as next year.

The company's sales are particularly strong in Ontario, according to Bulat. He added that, although Eurocom is a player in the second tier of notebook sales behind the likes of Toshiba, IBM, Compaq, Packard Bell NEC and Dell the company still has a long way to go to becoming a leading vendor. "The first three quarters of 1997 cumulative shipments gave Eurocom a 3.1 per cent market share," Bulat said. "They're in there with the likes of Hewlett-Packard, Panasonic, Digital and AST."

But, cracking into the top tier won't be easy. "I see them getting a little more aggressive against NEC and Dell and moving into the top five, possibly. But they have a long way to go before they reach top three (status)," Bulat said. "Eurocom is a niche player in a niche market."

According to Bard, the goal of the company is to offer the same standard features of desktop computers in its line of notebooks. The notebooks can be upgraded with high-speed processors and multimedia capabilities. All Eurocom notebooks are custom configured. "We don't have specific model numbers that refer to one pre-built unit," Bard said. Customers select the screen type they want first and certain notebook features come standard with these displays, he said. The lowest priced Eurocom notebook sells for approximately $2,400 and is configured with a 166MHz Pentium processor, 16MB RAM and a 2.1GB hard drive. "You can pick the CPU, ranging anywhere from a Pentium 166 with MMX all the way up to a 233MHz (processor) with MMX," Bard said. "Hard drives range from 2.1GB to 5.0GB and RAM is anywhere from 16MB to 128MB."

Of course, the feature-packed notebooks are heavier — with some closer to nine pounds in weight instead of the standard six and-a-half pound weight of many other notebooks. Bard said one of the key features of a Eurocom notebook is its full-size keyboard.

Eurocom has been selling notebooks exclusively since it was founded in 1989. The company, which employs 20 people, has its head office in Ottawa and another location in Mississauga, Ont.

In January, Eurocom released its newest high-end notebook — the 8500T5. It features a 15.1-inch active matrix display, concurrent operation of CD-ROM and a hard drive and floppy drive, 4MB video RAM, a TV line in, SVHS out and a 102-key keyboard with numeric keypad.

Jim Alexopoulos is vice-president of Microsource in Montreal, which has sold Eurocom notebooks for approximately 10 years. He estimates his company sells 100 units each month. "They're in a special area in the market," he said. "People consider them laptops, but they're really desktop replacement machines, (too)."

Joyce Gordon, a sales representative with Comet Computer Center in Vancouver agreed. Comet Computer Center has been selling Eurocom notebooks since 1991. "As much as any notebook could possibly be a desktop replacement, theirs is (a desktop replacement)," she said. "(Eurocom systems) sell so well because they're upgradable to very high-end machines," she said.

People are interested in the opportunity to upgrade their notebooks so they don't have to replace them in six months, Gordon added. "(Eurocom notebooks) have high-end processors and a lot of features built in [and it] makes them a popular choice," she said. "They're also lower in price than name-brand Toshibas, NECs and IBMs."

Although Comet Computer Center carries name-brand notebooks, Gordon insists Eurocom computers are better sellers. "People come to us and we give them alternatives. Eurocoms are generally a lot less money for the same horsepower, so, unless someone is set on a name brand, they'll go for a Eurocom."

Michele McLean is a freelance journalist based in Toronto

IBM packages software, services at *BPEC'98*

by Grace Casselman

IBM Corp is serious about doing business with its channel partners — that was the main theme at the recent IBM BPEC '98 conference in San Francisco, which drew more than 5,000 worldwide partners, including 190 representatives of 120 Canadian companies In fact, to prove the point, in a videotaped address, chairman and CEO Louis Gerstner said the company would invest US$780 million in the channel this year on incremental resources, training and support for IBM partners That's an increase of 20 per cent over 1997 s investment, he said

E-commerce was the big theme during the conference IBM is also getting serious about Windows NT, once the mortal enemy of IBM's OS/2 IBM's partners needed to hear that message, said Robert Freedman, co-founder of E-business solution developer Spyre Infostructure Inc in Ottawa, as NT is becoming an important force in the market-place

"It's a wake-up IBM is saying 'We're moving to NT'"

IBM announced it would offer three suites of NT-based software to the market, starting in Q2 The Enterprise Suite (code-named Bartholdi) is "designed to help large business integrate NT into enterprise systems while they protect their investment in legacy systems," said Jocelyne Attal, vice-president Netfinity worldwide system sales, IBM sales and distribution group It includes DB2 Connect for connection between NT desktops and data in DB2, the TXSeries for development of secure reliable transactional applications that can incorporate Java and distributed objects, MQSeries as a messaging and information backbone, Lotus Domino, DB2 Universal Database For Workgroup, eNetwork Communications Server, ADSM, AMS, and an install tool

The Departmental Suite (code-named Emerald) includes Lotus Domino, DB2 Universal Database For Workgroup, eNetwork Communications Server; ADSTAR Distributed Storage Manager, Tivoli's Application Management Specification; and an install tool

The Small Business Suite (code-named Rodin) includes Domino Intranet Starter Pack, DB2 for Domino, small business templates for customizing applications, a fax server, and an install tool

The bundles are currently in beta and pricing was not announced

"I think it's great," said Freedman "As an ISV, it enables us to have a very quick ability to bundle our software, load and install it on IBM hardware It's a very effective solution." Moreover, he stressed that it's an important indication that IBM and its Lotus subsidiary are integrating their technology and marketing efforts.

"It's fairly significant,' said Scott Lawrence, manager of partner development for Cognos Inc in Ottawa "IBM's putting some marketing teeth behind NT And everyone's looking for this technology approach of packaged solutions rather than building applications"

IBM also rolled out a slew of programs aimed at partners For example, substantial partner information is now available at *http //www ibm com/PartnerInfo/* IBM also launched something called ServiceSuite for customers, which will be sold by partners ServiceSuite is a worldwide offering, but depending on the locations, the package can include warranty and maintenance options, on-site services, remote technical support, and recovery services

Looking to the future, IBM Canada will work very closely with the U S on North American programs and initiatives, said David Dobson, general manager of channel and partner services at IBM Canada Ltd By the Year 2000, the organization expects to roll out its programs and services in one consolidated effort "North America is a reality we're embracing It's a global market place" For example, as of June 1, the company will sell AS/400 products through distributors, as Gates/Arrow, Business Partner Solutions and JBA have been given North American distribution mandates for the products CCW

Grace Casselman is Editor of Canadian Computer Wholesaler She can be reached at gracec@netcom ca

by Newsbytes

Canada's Teleglobe to open office in Thailand

Canada's Teleglobe opened its sixth Asian office in Thailand in February. From the Bangkok representative office, Teleglobe will offer its full range of services, including switched and non-switched voice and data services, broadcast, calling cards and private lease to carriers, ISPs and multinational corporations within the region.

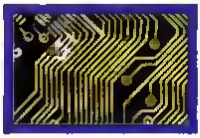
"We are very excited about the Thailand market and its opportunities, even in the current economic downturn," said Rick Ciccone, Teleglobe's vice-president and general manager, Europe and Asia Pacific. "Thailand's telecommunications market will be deregulating. This will provide for significant expansion of the telecommunications sector with lower prices, improved service quality and more choice of telecom suppliers."

Other Teleglobe offices in Asia are in Singapore, Hong Kong, Japan, the Philippines and Australia.

NEC opens new Philippines Electronics components plant

NEC Corp. and its NEC Components Philippines, Inc. (NEC-CPI) subsidiary have opened a new electronic components plant in the Philippines.

It will manufacture highly integrated printed wiring boards and power relay products, said NEC. Monthly production is set at 13,000 square metres for the printed wiring boards and 1.2 million units for the relays. The additional investment is intended to push monthly production to 20,000 square metres for PWBs and 3.5 million units for relays.



Year 2000 will cost Bangkok Bank US$3.5 million

Bangkok Bank has set aside US$3.53 million in budget funds for tackling the year 2000 problem, however, "the number is optimistic," according to Bangkok Bank executive vice-president Dr. Chotivid Chayavadhanangkur.

US$1.86 million will be spent on hardware and software and US$1.67 million will be for "people-ware" investment, he said.

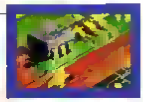
The high budget does not mean that the problem is complicated, but extensive, he said, adding that it needs human resources and budget funds. As a result, executives need to have an awareness and let IT departments deliver solutions.

Bangkok Bank has set up a Y2K committee as a project management team and a working group team. The committee is chaired by the executive director while the team is comprised of five members from top executives in computer-related fields.

Around 95 per cent of computer operations will need to be fixed, converting two-digit year formats to four digit year formats, he said. However, non-computer areas, such as PABXs, building administration, elevators, UPSes, air-conditioning units and vaults, will have to be compliant with the year 2000 as well, he said.

He added there was no need to worry about financial firms and banks and whether they would be ready for the Year 2000 since they have had to follow regulations from the Bank of Thailand and the Bank Association of Thailand, which state that solutions to the problem must be completed by the first quarter of 1999.

Matsushita adds single-chip MPEG2 video encoder



Matsushita Electric Industrial Co. Ltd. has announced the development of a complete MPEG2 video encoder on a single LSI (large scale integrated circuit) chip. The new chip is targeted at devices that record real-time video in a digital form, such as digital video cameras and future DVD Video recorders.

As conventional MPEG2 video encoders typically consist of several chips, the new device means manufacturers can save both space and power. It consumes 950 milliwatts when processing MPEG2 video, 360 milliwatts when processing MPEG1 video and has a chip size of one square centimetre. This is especially important for handheld devices such as digital video cameras.

Special features include different operation modes, such as high-resolution mode or low power mode, and complete processing of MPEG2 video using the LSI and two 16-megabit SDRAM memory chips. Matsushita said samples of the device will be available from June 1998, priced at US$162.

Hitachi, Mitsubishi and TI halt 1Gb DRAM project

The plans of Hitachi, Ltd., Mitsubishi Electric Corp. and Texas Instruments to jointly develop 1Gb DRAM (dynamic random access memory) chip have been put on hold.

A spokesman for Hitachi said the project has been delayed for about a year because of the poor conditions in the semiconductor market. "1Gb DRAMs are next, next-generation products. At present, each company would like to concentrate more on products that will be marketed sooner," he explained. "We are still jointly working together, it's just a little delay."

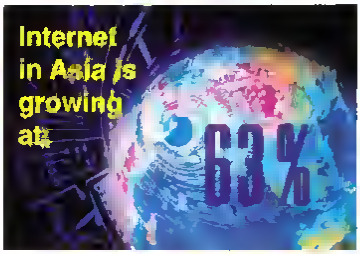
The three partners had originally scheduled the start of the next stage in the project for this spring, although this will now be started in spring 1999, the official said.

Fujitsu to build US$200 million media plant in Philippines

Fujitsu Limited is set to begin construction of a new aluminum media plant at the First Philippine Industrial Park Ecozone in Tanauan, Batangas in May. Investment for the first three years is pegged at US$200 million.

The facility will be built on a 20-hectare land area and is seen to provide critical support for Fujitsu's Canlubang (Laguna) factory, which is fast becoming a strategic hard disk drive production facility. Fujitsu currently produces hard disk drives and magneto resistive (MR) heads in its Canlubang plant.

Asian Internet outlook is healthy



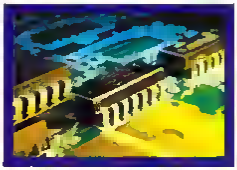
Despite the fall of Asia's currencies and the economic woes that have beset the region since July 1997, the number of Internet users in the Asia Pacific is continuing to grow at an almost unchanged rate, according to market research firm IDC

It announced that the compound annual growth rate for Internet users between 1995 and 2001 is now expected to be 63 per cent, down slightly from the 69 per cent forecast before July 1997

Several regional markets are expected to see the total number of Internet users at the end of 1998 at twice the levels they are currently

The largest problem facing regional ISPs at present is the devaluation of regional currencies The leased lines that service providers use to connect to the North American Internet backbone are priced in U S dollars so the price, in local currency has risen by several times over the last year

In specific regional markets, IDC found the number of new users has slowed in Thailand. Government initiatives, such as the abolition of floor-pricing charges by the Communications Authority of Thailand, are expected to help the nation achieve positive growth in 1998 through lower prices for end users and a better operating environment for service providers, said IDC



Hitachi announces 128Mb memory chips

Hitachi Ltd. has announced four new 128Mb memory chips, the industry's first such devices, according to the company

The chips include 128Mb EDO DRAMs (dynamic random access memory) and synchronous DRAMs.

The new chips are intended for use in personal computers and engineering workstations and were available in sample quantities last month, said Hitachi. It manufactured the chips by molding two 64Mb DRAM chips together

The EDO DRAM chips have an access time of 60ns while the S-DRAM chips support a PC 66MHz memory bus. CCW

Mitsubishi Electric embroiled in payoff scandal

Mitsubishi Electric Corp and several affiliated companies were thrown into the centre of a new payoffs scandal as it was alleged that the companies made illegal payoffs to a "sokaiya," or corporate racketeer

Mitsubishi Electric and Mitsubishi Estate Co are alleged to have paid Taichiro Otake substantial amounts of money in return for the smooth running of their annual shareholders meetings Such payments are prohibited by Japan's Commercial Code

Japanese media reports said both companies have admitted making the payoffs The payments were made between 1995 and 1997 and apparently disguised as fees for running advertisements in the magazine published by the Shibuya, Tokyo-based "*Japan Stewardess College,*" which is run by Otake's wife, Misao

Lafore Does Master Job With C++ Course

by Stephen Ibaraki

Keeping current with Java, ActiveX, C++, and Visual Basic 5 always poses a challenge. Now, if only your customers could take courses that fit into their schedule. Does this sound familiar?

An available solution exists. The "*C++ Interactive Course*," is one of a host of new titles that allow on-line interaction over the burgeoning Internet.

Robert Lafore's updated entry provides a solid foundation in C++. Written in a humorous and engaging style, the book works for both new and professional programmers.

Are you or your clients C programmers wanting to upgrade and bored with the same old C to C++ discussions? Take notice! Only a third of this book will be review. To avoid "bad habits," the book begins and then continues with object-oriented concepts and examples.

Tutorial in nature, each chapter breaks into smaller sessions that cover one major topic. Exercises and a quiz complete each session providing excellent reinforcement. In attempt to make the language less intimidating, the early sessions are quick and easily digestible with lessons increasing in complexity as you progress. You can complete each one of the 96 sessions in less than 75 minutes. An interesting and unique dialogue amongst fictitious programmers provides summaries—very effective, and innovative. They help to illustrate essential points and answer questions. Both students and professionals react favorably to Robert's books, but this one heightens your interest. A rare attribute in programming books with substantive content.

> *"C++ still lets you get closer to the hardware, so it will probably go on forever for systems programming, and for people who don't like Java for one reason or another."*
> — *Robert Lafore*

Object Orientation Is Inevitable
An interview with Robert Lafore, author of C++ Interactive Course.

CCW Where is the object-oriented paradigm leading in two, five and 10 years?

I think object orientation will almost completely replace the procedural paradigm, if it hasn't already. It's a natural evolutionary step in program organization, and there aren't too many reasons not to take advantage of its benefits, except perhaps in certain niche situations.
There's probably something lurking on the horizon, the next thing after OOP, but I have no idea what it might be. In any case, it'll take people a while to learn how to fully exploit OOP.

CCW In general, where are programming languages evolving?

I keep waiting for a visual approach to replace text-based source code. This has already happened in programming GUIs (Graphics User Interfaces), but it should be possible to program the logic parts of the program visually as well, by dragging boxes and lines around the screen. But so far no one has come up with a widely accepted architecture.

CCW How do you see C++ evolving as compared to Visual Basic and Java? What defines the language choice for projects?

I think Java is terrific. It's a somewhat higher-level language than C++, with a lot of advantages. For instance, most people find it a great relief to stop worrying about pointers.
On the other hand, C++ still lets you get closer to the hardware, so it will probably go on forever for systems programming, and for people who don't like Java for one reason or another. Visual Basic still has some performance limitations, but for many

Title	*C++ Interactive Course*
Author	Robert Lafore
Publisher	Waite Group Press
ISBN	1-57169-063-8
Content	875 pages with enclosed CD-ROM
Level	Beginning to Intermediate
Cost	$79.95
Description	This C++ tutorial/reference book is one in a series of new interactive titles. Through short lessons, and Internet exchanges, the reader will gain a solid foundation in C++ programming
Rating	A+ — Recommended for all new and experienced programmers wishing to move to Object-Oriented programming using C++

The initial chapters lead the reader gently into object-oriented programming with an excellent overview and introduction — the best treatment of the topic I have ever seen. The reader advances into constructors, operator overloading, inheritance, and pointers. Completing the book are chapters on streams and files, templates, and exceptions. The useful appendices include Standard Template Library (STL) algorithms, member functions, and a discussion of using BORLAND C++ and Microsoft Visual C++. A companion CD contains all programming lessons and examples. Uncommon in most programming texts, Lafore makes good use of meaningful analogies and diagrams to clarify every point.

Now, comes the Internet twist. The book includes enrollment in the eZone — a complete Web-based Internet learning centre. As you work through hands-on sessions, you can log on to the eZone to ask questions, examine a database of frequently asked questions (FAQs), and browse reference material. You can also write the quizzes on-line, exchange comments with others, earn a certificate of achievement, and receive Continuing Education Units (CEU) from Marquette University. There are some "caveats" here. You are limited as to the number of questions you can ask the mentor, Internet Web site over-activity can lead to long wait times or time outs, and CEUs come with a price tag. However, the on-line connection does show promise.

In summary, the book ranks high in readability and technical content. It can serve as an excellent textbook, tutorial, and reference for anyone wanting a thorough foundation in C++ programming. The on-line aspect will get better with time, but do not buy or recommend the book just for this feature. The $70.95 price tag is a little steep but justifiable for the superb content and writing style. CCW

Stephen Ibaraki, ISP is a lecturer, writer, advisor and co-convenor for the BADM Computing Program at Capilano College, which has won a number of international, national and provincial awards. He is Novell NEAP and Microsoft AATP-certified and can be reached at sibaraki@capcollege.bc.ca

small-scale projects it's fun and easy to program, and much faster than C++ and Java.
Now, there's a standard for C++. That's good. Having a stable platform to work on is quite a luxury. At this point, Java is anything but a stable platform.

CCW What led you into this field?

In the late 1970s, I invented Interactive Fiction, little stories in which the reader could interact with fictional characters and influence the outcome of the story. They ran on the Radio Shack TRS-80 and the Apple II, so they were rather limited by disk and memory sizes.
They sold all right for a while, but eventually the novelty wore off and I needed a new career. About this time I met Mitch Waite, and we co-authored a book on CP/M (if anyone remembers that OS). I found I really enjoyed explaining things, and I've been writing computer books ever since.

CCW Your writing style is engaging and often humorous. This keeps the readers attention. What motivated and started you into taking this approach?

I've always had a weird sense of humor, and Mitch reinforced it. He went on to become my publisher (Waite Group Press, now a subsidiary of MacMillan Publishing Company). He was always reading my stuff and telling me, "Make it funnier!" I think it's true that a little humor makes the reading easier because it makes the text a little more memorable. Text that's too dry makes the readers eyes glaze over.
On the other hand, there's always a danger in trying to be funny. One of my books had a line like "Now that you've mastered this topic, treat yourself to a cookie, or perhaps a stiff shot of bourbon." Pretty soon I got a call from a college in Louisiana. The lady said they'd like to use my book in their programming class, but were afraid this sentence would damage the students' morals.

Column

Show Me The Money!

Understanding The Dynamics Of Bank Financing

by Douglas Gray

As a reseller, you'll probably require bank financing at certain times. As you know, banks tend to be conservative and risk-averse by nature. They certainly don't have a venture capitalist mindset. To maximize the chance of a successful outcome in your initiatives to borrow money, here is an overview of the dynamics of the process.

What The Lender Wants

Once you start negotiating with the financial institution, you must sell the lender on the merits of your business proposal. As in all sales presentations, consider the needs and expectations of the other party — in this case, the loans officer. A loans officer will be interested in the following:

- Your familiarity with the business concept and the realities of the marketplace, as reflected in your business plan.
- Your ability to service and pay back the debt with sufficient surplus to cover contingencies, including interest charges, so that you eventually repay the debt in full. This would be demonstrated in your cash flow forecast and projected income statements.
- Your ability to provide security to the bank for the loan.
- Your level of commitment as shown by your equity in the business or cash investment in the particular asset being purchased.
- Your secondary source of repayment, including security in the event of default or other problem, and other sources of income.
- Your reasons why the money is needed and how long you need it for, and how much you need.
- Your track record and integrity, as shown in your personal credit history, your business plan, and business results or past business experience.
- Your businesslike approach. During the loan interview, remember that you are doing business, just like when you are with a customer. Don't be subservient, overly familiar, or too aggressive. Remember, a lender is in business for the same reason you are — to make a profit, and to minimize or eliminate bad debts.
- Your judgement in supplying information. Be sensible with the number of documents you provide at the outset. You do not want to overwhelm the loans officer with material. For example, if the amount request is small, an introductory page and summary of your business plan provide a good enough basic loan submission, though you should have all the other documents prepared and available in case they are requested.
- Your personal appearance. You should present yourself in a manner that projects self confidence and success.
- Your consideration in allowing sufficient lead time for approval. The lender needs a reasonable time to assess your proposal. Also, the loan may have to be reviewed at another level within the financial institution.
- Your credit rating. It's a good idea to review your credit rating periodically, as there may be errors or blemishes to correct in your file. Note your positive and negative points, so you can discuss these when raised by the lender.

> *"Remember that everything is negotiable."*

Why Business Loans Are Turned Down

There are various factors at play if the lender turns down your loan application. Common reasons are: outside bank policy, business idea considered too risky or unsound, insufficient collateral or business experience in the industry. Other reasons include perceived lack of financial commitment, poor business plan or credit rating or the purpose of the loan is not explained or unacceptable. Another influencing factor could be an inexperienced or overly cautious loans officer with a low credit approval limit. This would necessitate other people passing judgement on your loan application without you meeting them in most cases. Always try to ensure that the loans officer you are dealing with has the final approval authority for your loan limit needs.

Steps When Your Financing Becomes Approved

If your request for financing is approved, find out everything you need to know about the conditions, terms, payment methods, interest rates, security requirements, and any other fees to be paid — assuming you have not already negotiated these factors. You normally receive a business loan commitment letter detailing this. If not, ask for one. No decision to accept the financing should be made until all this information is provided and understood. You may wish to ask your accountant and lawyer to assist you in the loan application in advance and to review the bank's approval. If you are not completely satisfied with the loan package, check out the competition. Also remember that everything is negotiable. Look on the loan/security offer from the bank as the starting point for negotiated improvements to improve the package to your benefit.

In summary, remember that you are trying to convince the lender of three important factors:

- That your loan application is for a worthwhile purpose and the funds are sufficient to accomplish your business objectives.
- That you have the ability, integrity, and commitment to make your business a viable one, and the management skills or access to those skills to make it a profitable one.
- That the loan can be repaid out of the normal operational activities of the business on a realistic cash flow basis, and the bank will not have to sell the assets that you have pledged as security. CW

Douglas Gray, LL.B., formerly a practising lawyer, is a Vancouver-based speaker, consultant, columnist and author of 16 best-selling business books, including The Complete Canadian Small Business Guide, published by McGraw-Hill Ryerson.

How Does This Sound To You?

by Sean Carruthers

Web pages containing MIDI sound files are likely rather familiar

For your page, or for your clients' site, there are a few ways to enhance a page with sound — without making the page sound like a vintage video game gone haywire

Resellers can benefit from new sound editing software, by adding a splash of sound to Web pages as well as being able to offer packages for resale to your customers

Sound Editing

A number of packages are available for sound manipulation, editing, and compression, such as Sound Forge and Cool Edit Pro

Cool Edit Pro

Previously available as a shareware program, the final version of Cool Edit Pro (Suggested retail US$399 — *http://www.syntrillium.com/pro.htm*) is now shipping, offering plug-in support for ActiveMovie and DirectX, MIDI triggering and 64-channel mixing

One of the most respected sound editing suites now is Sonic Foundry's Sound Forge software package (Suggested retail US$495 — *http://www.sonicfoundry.com/SoundForge/default.html*) Among a long list of features, this software package supports DirectX, MIDI and AVI

Both of these programs support most common sound file types as well as conversion from one type to another These files can then be used right on a Web page (embedding the commonly-used wav file format will pop up an associated player, or for subsequent export to a RealAudio encoder

Get Real

By far the most common way to add sound to a set of Web pages is by using Progressive Networks' Real Audio format. Real Audio is capable of playing back encapsulated snippets of sound, or of encoding a live sound source for virtually live playback over the 'Net.

Using the RealEncoder program available for free download at the Web site (*http://www.real.com/encoder/index.html*), common sound files are converted and saved in the Real Audio format. Any Web page can feature links to streaming audio, without requiring the expense of a server Encoding can be optimized for a variety of different connection speeds, including ISDN, which provides near-CD quality playback

For a slight investment, Progressive Networks also offers a program called RealPublisher (Suggested retail US$50 — *http://www.real.com/publisher/index.html*), a package which integrates the sound files with the page creation, and supervises uploading to the Web server

Like the encoder, the RealPlayer itself is free for download (*http://www.real.com/products/player/index.html*), but is also available for retail sale as RealPlayerPlus, with a few more goodies thrown in (Suggested retail US$30 — *http://www.real.com/products/playerplus/index.html*)

Integrating it All

The easiest way of getting sound onto a Web page is to make it a click-through link, which will call up the appropriate application on the user's browser For a more seamless integration though, the **<EMBED>** tag seems to be the way to go (RealAudio doesn't appear to easily support inlining at this point)

A typical embedding tag for a sound file would look something like:

<EMBED SRC="blah.wav" AUTOSTART=TRUE HIDDEN=FALSE LOOP=TRUE>

The format is actually pretty self-explanatory The **AUTOSTART** option determines whether the sound will start playing immediately upon loading, or wait for the user to start it. HIDDEN will make the entire player invisible (not a good idea if **AUTOSTART=FALSE!**), which is a way of giving the illusion of a 'background' sound Setting **LOOP** to **'TRUE'** will cause the sound to — well, loop

Homebrew Real Audio

Contrary to popular belief, you don't need an expensive piece of equipment to deliver RealAudio in a simple manner Those users planning on delivering a lot of streaming audio will probably need a proper hardware/software package to handle the load, but for the casual user, the tools necessary are generally no more complicated than a text editor and the free encoder program

1. Encode the source sound file using RealEncoder and save with the .ra file extension
2. Upload the .ra file to the Web directory
3. Create a second file, text-only, which contains nothing but the full address of the RealAudio file, without HTML tags
4. Instead of linking the sound file itself from the Web page you want to point to the sound file, link to the text file This will redirect the RealAudio player to the location of the real sound file, but will cause it to 'stream' back through the text file
5. This is the tricky one ensure that your Web server can handle RealAudio recognition and redirection If this method isn't working, most times it can be fixed by adding one or two lines to the MIME types file on the server Consult with your ISP if you'd like this done

Sean Carruthers does Web consulting for Armchair Airlines Computer Services (http://www.armchair.mb.ca) in Brandon, Man He can be reached at oneiros@armchair.mb.ca.

Column

HARDWARE And SOFTWARE Are In A State Of Flux

by Alan Zisman

We're in a transition period

In past columns, we've looked at up and coming gizmos and gadgets designed to overcome the bottlenecks and design limitations that plague current hardware. A collection of three-letter acronyms that taken together can easily leave the head spinning: USB, DVD, AGP and more (as well as the thankfully acronym-less FireWire).

We've seen how many of these advances have stalled. The hardware's ready (mostly), but until the next generation of operating system releases, there's no built-in support. With few products on the shelves, there's little consumer demand. And with little consumer demand, few products make it to the shelves.

As well, the products that are out haven't been entirely overwhelming.

Despite promising blazing video speeds, for example, the first generation of Accelerated Graphics Port (AGP) video cards have been only modestly faster than the PCI cards they aim to replace. First-generation Digital Video/Versatile Disk players are unable to read the gold CD disks made by increasingly popular CD-Recordable units (some newer DVD models no longer have that limitation). Universal Serial Bus performance has been as slow as the product's acceptance.

[illegible] on Pentium-II CPUS [illegible] provide [illegible] many expected.

[illegible] Microsoft. Though I've [illegible] to hear the [illegible] being blamed on Microsoft, it seems like almost everything [illegible] AGP, USB [illegible] are a patchwork [illegible] Windows 95 and not optimized for perky [illegible] Windows 98 with future hardware [illegible] port built [illegible] better.

WDM Drivers

But while these next generation operating systems provide some answers, they also raise a new set of questions. Microsoft has promised that Windows 98 and NT 5.0 will share a common hardware device driver model. The Windows Device Model (WDM) will let hardware developers write a single driver usable by both the mass-market Windows 98 and the high-end NT 5.0 operating systems.

But there's a catch. WDM drivers should work happily on machines running either of Microsoft's next generation systems, but will be incompatible with the installed base — 100 million+ machines running Windows 95 (as well as the several million running NT 4.0). And many if not most of the users in that installed base will not be in a rush to upgrade to Windows 98, at least not until they purchase a new machine that comes with the operating system included.

You can develop old-style Windows 95 drivers These will continue to work with Windows 98, but won't work with NT 4 0 or 5 0

If you're producing hardware add-ins (sound cards, video cards, and the like), or are distributing such products, this is a dilemma For your new products, should you develop WDM drivers, for the new Windows 98/NT 5 0 users? Should you develop backwards-compatible Windows 95 drivers? Should you play it safe and develop both (at double the cost?)

Larger companies with deeper pockets will probably play it safe Creative Labs for example, is promising to follow that strategy (though Windows 3 1 holdouts will increasingly be out of luck) Universal Serial Bus products from smaller companies may include WDM drivers only, on the reasonable assumption that few Windows 95 users actually have USB ports Add-in cards made for the legacy ISA bus may continue to include classic Win95 drivers only, leaving NT users with complaints, just as now

All in all, not a pretty picture

In January, we looked at Microsoft/Intel's PC98 plans — an outline of where the two giants want to move the industry Ultimately, they'd like to see us all abandon the 1984-era ISA bus, dropping support for those familiar 16-bit cards that with their limited IRQ numbers and non-intuitive installation make it difficult to implement real PC Plug and Play, and drive up support costs

LPC Specification

Intel has released some specifications aimed at helping product manufacturers during the transition Its Low Pin Count interface (LPC — here's yet another three-letter acronym!) is designed to make it easy to redesign motherboards to move traditional components like parallel, serial, and keyboard ports, along with hard disk and floppy disk controllers off the ISA bus (Even though most motherboards now have these devices built-in they're currently actually part of the ISA bus)

National Semiconductor has used the LPC specification to release its PC87360 Super I/O chip, integrating all those devices, resulting in lower cost while taking up less space Future LPC products will include memory and system management controllers, along with motherboard-based sound circuitry

Intel envisions a three-phase transition along the way to replacing the ISA bus First, current motherboard devices will migrate from ISA to LPC, while systems retain the ISA bus for compatibility with legacy peripheral devices (most often sound cards and modems) In the second phase, as USB and FireWire devices become more common, systems will drop the ISA bus entirely, with users adding PCI cards internally, or using USB and FireWire for external devices Finally, as a wide-range of external peripherals such as printers become available for the new external ports, support for legacy parallel and serial ports will be dropped entirely

LPC is, according to Intel, a key step along the way It allows system designers to upgrade existing designs with relatively minor modifications, while upgrading performance The ISA bus runs at a leisurely 8MHz, while LPC uses the PCI bus's 33MHz clock. Its reduced pin count saves on space and power and runs cooler, making it especially attractive to notebook designers In *InfoWorld*, Intel's Platform Component division marketing manager, Jan Camps claims LPC "will result in lower costs and improved efficiency for hardware OEMs and developers, and make the benefits of higher-performing technologies available more quickly for PC users Intel has opened the specification so the industry can quickly adopt the technology and integrate it into motherboard legacy I/O peripheral development "

"WDM drivers should work happily on machines running either of Microsoft's next generation systems, but will be incompatible with the installed base — 100 million+ machines running Windows 95 (as well as the several million running NT 4.0)."

Technology pushes change Despite our sense of constant product obsolescence, however, the very success of the personal computer has created a huge installed base that is demanding gradual evolution These contradictions require careful planning from designers, manufacturers, wholesalers and distributors down to retailers and ultimately end-users. Know where the industry is heading, and you'll be able to manage the coming transitions. CCW

Alan Zisman is a computer journalist and teacher, living in Vancouver He can be reached at azisman@rogers wave ca

Cisco launches multi-service access concentrator

Cisco Systems Canada Ltd of Toronto, has announced the Cisco MC3810 multi-service access concentrator. It's designed for regional and branch office applications, and integrates Cisco IOS software routing with compressed, switched voice and video applications (such as distance education across ATM and Frame Relay)


Cisco MC3810

The MC3810 operates in both public or private network environments, on facilities from 56Kbps to 2.048Mbps. The base system includes Cisco IOS software, serial, LAN and analog voice ports supporting G.729 voice compression and fax with a Frame Relay trunk. Pricing starts at $6,146.

Call *(416) 216-8000*

BeyondTV hits Canada

ViewCall Canada Inc of Winnipeg has launched BeyondTV — what it calls 'Net-connected television. Using the TV and a $400 set-top box, users have access to Web services and the Web.

The service costs $29.95 per month, and includes five E-mail addresses. For more information, see *http://www.beyondtv.net*

Disney offers Hades' Challenge

Disney Interactive has released its latest CD-ROM title, an interactive adventure and puzzle game based on the characters of the Mouse Factory's latest animated feature, Hercules. Hades' Challenge is a lavishly animated game aimed at children from seven to 12 years of age, which features the voice talents from the film (including actors James Wood, Rip Torn, Matt Frewer, Tate Donovan and Bobcat Goldthwaite) adding dramatic impact to a quest that takes the player across the ancient Mediterranean world, from Troy to the Underworld. The game has more than 5,000 drawings of original Disney character animation which brings life to a series of brain teasing puzzles and a mythological quiz show, the Hades Challenge.

Disney Interactive titles have consistently been among the most popular in the family retail entertainment market in the past few years. At a street price of about $40, Hades' Challenge is intended to be a 'discretionary purchase,' often picked up by a parent as a low-risk choice for the family. Hades' Challenge comes in a dual Windows 95/Mac format.

Call *(818) 553-5010.*

Personal income tax software race is on

HomeTax, which was the first to market with the release of its 1998 personal income tax software in late December of 1997, is in a race with SoftKey's CANTAX 98.

HomeTax, a highly rated tax program, has a suggested list price of $29.95, minus a $5 mail-in rebate. It features a new, redesigned task-oriented user interface, and well-integrated on-line help and multimedia tutorials, and advice from financial consultant Brian Costello.

CANTAX, with a suggested retail price of $36.95, offers an interactive interview feature, interview Plus, and interactive tips and tutorials by tax expert Evelyn Jacks. According to Garry Kalinski of CANTAX, Interview Plus "takes taxpayers from the basic T4 slip for individuals to a small business situation, creating a customized scenario for a cross-section of tax situations."

See *http://www.cantax.com or http://www.hometax.com.*

REX PC Companion to debut in Canada

On Feb. 24, Franklin Electronic Publishers launched the REX PC Companion device in the Canadian market. The REX is a 1.4-ounce credit-card sized device that gives the user a powerful, visually oriented, easily updated database tool. REX PC has been a hit at recent computer shows, including the Las Vegas Comdex last November, and has won a number of industry awards.

See *http://www.franklin.com.*

PictureTel upgrades videoconferencing systems

On Jan. 22, PictureTel Corp., the leader in the global videoconferencing market, has announced substantial upgrades in the performance of two of its leading videoconferencing systems, SwiftSite and Venue. Both systems are now multi-location compatible (meaning multiple users can conference at once, not just two), utilizes higher data rate speeds between users, and offers dynamic bandwidth allocation, all of which makes for high quality, multi-user capability.

Enhancements to the Venue 2000 product include LimeLight, an automated speaker locating feature (which causes the video camera to focus on whoever is currently speaking). Automatic speaker location enables users to operate 'hands free,' since they no longer have to manually point and focus the camera on each speaker in a roomful of people.

Contact *(905) 474-4334*


IBM Server

IBM adds servers for small/medium businesses

IBM Canada Ltd. has rolled out Netfinity, AS/400e and RS/6000 systems aimed as servers for small and medium-sized business, with starting prices ranging from $3,999 to $29,280.

The systems are expected to support environments of between three and hundreds of users, says IBM. For more information, see *http://www.ibm.com/servers*

Symantec and Archer Enterprixe Systems team up for sales force automation

On Feb 5, Toronto-based Archer Enterprise Systems Inc and Symantec Canada held a joint press briefing to announce the release of an integrated sales force automation system that links the popular ACT! contact management program to enterprise databases The new product, partly subsidized by XDL Inc , an investment company headed up by ex-Delrina executives, is aimed at those of the 1.2 million users of ACT! software who are part of medium to large enterprises, but who are limited to standalone use of ACT! Over 6,000 corporations are registered ACT! users, and the new Archer product will allow those corporations to have full access to and control over their employees' ACT! files This will enable much more productive use of the information, allowing individuals' files to be integrated into massive databases for data mining and coordination of marketing efforts, for example

According to industry estimates, only about 12 per cent of potential sales force automation users currently are equipped with some kind of computerized sales force system, and many of the systems currently in use are extremely expensive, proprietary and complex to administer This offers the prospect of rapid growth to a system which Archer claims is inexpensive, standardized, and whose data entry front end (ACT!) is already in very widespread use The initial release of a version of the Archer product which is compatible with ACT! 3 0 has been announced, and an ACT! 4 0 version is expected in the first half of 1998

Contact *http //www archer com*

Compaq Canada cuts system prices

(NB) — Compaq Canada Inc has cut prices on assorted notebook and desktop personal computers

The company said it marked down the prices on 14 Deskpro 2000 models, 14 Deskpro 4000 models, and six Deskpro 6000 models, by anywhere from five to 19 per cent It also reduced the prices on six of its Armada 1500 notebooks, three Armada 4100 models, and five Armada 7700 models, by three to 15 per cent. See *http //www compaq ca.*

Symantec posts cure for Excel viruses

(NB) — Symantec Corp. has posted detection and cure software for a new class of Microsoft Excel spreadsheet virus Researchers at the Symantec Antivirus Research Center (SARC) said earlier reports that the virus affects only French-language versions of Excel were incorrect

Carey Nachenberg, chief researcher at SARC, said his crew has shown the new virus, discovered in France, works on English-language versions of Excel too Dubbed the "XF/Paix A" virus, it plants itself in an Office 95 or Office 97 Excel spreadsheet and changes the name to "Enfin la Paix" or, roughly, "Peace at Last "

The detected virus works only on PCs, not on Mac versions of Excel, researches said

Nachenberg said the virus is so benign it appears to have been released as a proof-of-concept exercise Now that it is proved, he added, less benign viruses in this new class could appear quickly

What differentiates this virus from other Excel macro viruses is the language it uses, Nachenberg explained. Current Excel versions actually use two macro languages, the primary one based on Visual Basic and an older legacy language from Excel 4 0 and before

Technical details on the virus and the Norton Antivirus/Norton Utilities versions of the bug cure are available at http //www symantec com/avcenter The cure is available as an automatic update for every shipping version of the firm's anti-virus utility, the researchers said CCW

Smart & Friendly Inc. has launched high-speed multi-read CD-ROM towers

(NB) — CD-ROM servers are being used increasingly in corporate networking environments for storage Now Smart and Friendly Inc. is shipping a line of 32X multi-read CD-ROM towers for large and small local area networks (LANs) and enterprise systems

The company says its CD-ROM towers provide high-speed online storage for applications or data, and are configured with four, seven, or 14 multi-read drives

The CD-ROM towers include network CD-ROM software from Ornetix and MediaPath

They include 10-user licences for CD-Vision and CD-Commander from Ornetix Network Products and 60-user licences for MediaAgent from MediaPath Technologies CD-Vision reportedly creates a dedicated CD-ROM server on Novell and Microsoft networks, and improves network performance by off-loading all CD-ROM traffic from the main server and client workstations

MediaAgent provides CD-ROM administration features and works independently of all network operating systems A Microsoft Explorer plug-in, MediaAgent uses the Windows interface to give users icon-based access to any CD-ROM on the network as if it were a local drive

Estimated street prices of the standard versions of the Smart and Friendly 32x CD-ROM network towers are US$845 (four drives) and US$1,325 (seven drives). The deluxe versions, which include locking doors, are priced at US$1,599 (seven drives) and US$3,199 (14 drives)

The Power Of Search Engines And Demos

by Graeme Bennett

Like the Olympic torch that must be kept burning, your sales have to be kept alive by keeping your eyes on trends and developing strategies that maximize your strengths and those of your associates

I'll describe some of the techniques I use to more efficiently solve customer support issues and keep an eye on emerging technologies that could end up as profitable product lines

The Internet

One of the many valuable aspects of the Internet is the way that search tools like AltaVista *(http //altavista digital com)* allow users to mine for data on the Web and Usenet

As many *CCW* readers know, Usenet newsgroups are often polluted with so much "spam" and irrelevant junk mail that it is fairly inefficient to browse the newsgroups directly even with a newsreader that filters out junk messages and allows you to follow "threads" efficiently My preferred method is to use AltaVista and search for the terms I am looking for directly, using that search engine's Boolean operators — primarily, by adding a plus sign before any word I want to be included in my search criteria, and by putting quotes around any string of text I want to preserve

For example, the other day, I had a problem where my 3Com EtherLink XL 10/100baseT network card was crashing Windows 95 OSR2 with a "Windows protection error" After a little trial and error (the problem went away when the card was removed), I determined that it was related to the network card, although I was perplexed because I was using the latest drivers, and the card and drivers worked fine on a different Windows 95 machine Using another computer I accessed AltaVista, selected the Usenet search option and typed

+windows protection error" +3com

Then I clicked "Search." A few seconds later, the answer I needed popped up at the top of the list. As it turned out, 3Com was aware of this problem, which affects only Windows OSR2, and only in some cases. Best of all, the company had a new driver that fixed the problem

Now, obviously AltaVista isn't the only search engine out there that can find the information you need, so if you are happy with

Remember you'll get the most meaningful results if you specify the exact model name of the product you are searching for and any unique words that characterize the situation you are searching for information on

(and get the results you want from) Excite, Lycos, Yahoo, or whatever other search engine you prefer — great! However, if you, or your employees, are getting 12,000 matches when you search for something on the 'Net, you might want to brush up on your searching skills, perhaps by taking a night school course, or minimally by reading the Help pages that describe the advanced search functions of any search engine Better still, train your employees on how to more effectively deal with support-intensive customers by using a search engine

Tradeshow Rants

Speaking of tradeshows, I'd like to jump onto this stack of soapboxes I have here and have a good old-fashioned rant for a moment At the recent Comdex/PacRim tradeshow, I was stunned by how many manufacturers' reps in Canada were apparently unaware of the "talk on the street" regarding recent, current or near-future product announcements or technology demonstrations by their parent companies.

Kudos To Demos

The Web is a great way to deliver trial versions and "free" demos of a wide variety of products Now that's how to draw a crowd and get people talking Microsoft understands the power of The Demo It was showing off several beta products, including Office 98 for Macintosh and Windows 98 at Comdex Probably not coincidentally, Microsoft has sent copies of neither product to this member of the media After all, we'd find out what they're really like

I am reminded of the joke about what happens when Bill Gates dies St Peter (the heavenly equivalent of Steve Ballmer?) says, "Bill, you've done some very good things, but you've also done some very bad things It has, therefore, been decided that you have a choice of going to Heaven or Hell."

Bill asks to see each of these most final destinations before deciding From the Pearly Gates, he sees a bunch of old people floating around playing harps "Hmmm," Bill says, "looks pretty boring." St Peter then whisks him straight to the entrance to Hell, where Bill is amazed to see scantily clad women frolicking on a sandy beach, partying, laughing and having way too much fun to the sounds of the Rolling Stones "Hey," says Bill, "that looks great I'll choose Hell."

"As you wish," says St Peter Instantly, Bill finds himself up to his neck in boiling water All around him, tortured souls are screaming piteously "This isn't what I chose!" cries Bill Gates "Yes it is," replies St. Peter "— but that was the demo version."

Graeme Bennett is the Senior Editor of The Computer Paper and a former computer retailer He can be reached at graeme@top ca.


Peter Ciceri

Compaq Canada announces new president

On Feb. 9, Compaq Canada introduced a new president and managing director for the Canadian division, a veteran computer industry executive who has spent the last 13 years in the Asia Pacific high tech market.

Peter Ciceri, 42, is a native of Victoria, BC, and has worked in senior positions for a number of technology firms including Xerox, Sperry/Univac, Unisys, Hewlett-Packard, UB Networks, and most recently, Tandem Asia Pacific Ltd.

At a press conference in Toronto, Ciceri was reticent about details of the future implications of Compaq's purchase of Digital on Digital's Canadian operations. He stated that Compaq was in a 'quiet period' immediately following the announcement of the acquisition, and it might be some weeks before decisions on matters such as the status of Digital's US$1 billion a year manufacturing operations in Canada were announced. Ciceri was firm in stating his belief that both Tandem Computer and Digital should be considered as having been 'reborn' as part of Compaq, and that his first priority as head of Compaq Canada would be to reinforce Compaq CEO Eckhard Pfeiffer's commitment to all of Digital's customers and product lines.

Ciceri's appointment coincided with the return of Don Weatherson, Compaq Canada's acting president, to Weatherson's former position as a vice-president at Compaq's Houston head office. Compaq had been searching for a long-term replacement for former president Susan Miller, who departed suddenly several months ago. According to Weatherson, "Peter's experience, vision, keen judgment, customer focus and concern for the people aspects of our business speaks volumes about the superb prospects in store for Compaq Canada. I'm returning to my Houston duties confident that Canada is in good hands."

Ciceri served notice that the integration of Digital's Canadian operation into Compaq would take a significant amount of his energies in 1998.

Merisel Canada head resigns

Thomas Reeves has resigned as president of Merisel Canada Inc. At the time, the company said Reeves had accepted a new position in the country, which would be made public in subsequent weeks.

In a statement, Reeves said, "This has been a very difficult decision for me. I believe it is the best decision for me and my family. I have been with Merisel for over 10 years and I think that it is the right time in my career for a change."

Reeves' past Merisel positions included managing director of Merisel U.K. and managing director of Merisel Europe.


Thomas Reeves

Merisel Canada says it is searching for a replacement, and Merisel Inc. president and COO Robert McInerney will oversee Canadian operations in the interim.

Merisel Inc., of El Segundo, Calif., has promoted James E. Illson, the company's senior vice-president and chief financial officer, to the position of executive vice-president and chief financial officer.

Prior to joining Merisel in August 1996, Illson served as senior vice-president and chief financial officer of Bristol Farms, a Southern California specialty grocery company.

Hitachi America announces new company president

(NB) — Hitachi America Ltd. has appointed Tomoharu Shimayama to the position of president. He will succeed Tsuneo Tanaka, who passed away on Jan. 20.

Shimayama, 56, joined Hitachi in 1964. He most recently served as general manager of the Power Group in Tokyo, Japan, a position to which he was appointed in June 1997. Before that he was general manager of the International Business Planning and Development Group from 1995 to 1997. He is an economics graduate of Wakayama University.

The company also announced that Shimayama and Yoshiro Kuwata, senior executive managing director of Hitachi Ltd., will be elected to Hitachi America's board of directors. Kuwata will remain based in Tokyo. CCW

Are there personnel changes at your company?

E-mail: ccwmag@tcp.ca

CALENDAR

March 3-5 — **The Enterprise Resource Planning Summit**
Chicago
http.//www.dcl.com/erp/

March 17-19 — Winnipeg — **Mastering**
March 19-20 — Edmonton — **Telecommunications**
March 24-25 — Montreal — **Fundamentals:**
March 26-27 — Ottawa — **The Basic of Voice and Data Communications**
Contact: Two Rivers Technologies
Call: 201 798-3311
Fax: 201-798-3388
E-mail: trisemnar@aol.com
http://www.tworivers-tech.com

March 23-27 — **Comdex/Enterprise '98**
San Francisco
http://www.comdex.com

April 17-19 — **Computerfest (Spring) &Internet Fest**
Mississauga, Ont.
Call: (416) 925-4533
Fax: (416) 925-7701
E-mail: dcarter@complest.com

April 27-29 — Calgary — **ITIL Service Management Essentials**

March 25-27 — Toronto
June 15-19 — Toronto — **ITIL Problem Management Practitioner**
Contact: Pink Elephant
http://www.pinkelephant.com

May 15-22 — **CTI EXPO**
Toronto
http.//www.newmedia.ca

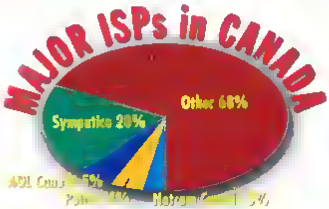
Oct. 5- 9 — **CIMS Annual Trade Show and Documation Conference**
Toronto
905-338 9030
http://www.interdoc.ca
http://www.cims.ca

Do you have an upcoming event you'd like to see listed in CCW's Calender? E-mail: ccw@tcp.ca.

Nifty Numbers

Major ISPs dominate, in Canada

Between 40 and 50 per cent of all Internet subscribers in Canada get their service from a major Internet Service Provider (ISP) — a national company with points of presence in major metropolitan cities, according to a report called *"The Internet Service Provider Market*



in Canada," from Evans Research Corp

Most of the other subscribers get access via an ISP with about five employees and less than $500,000 in annual revenues, says Evans

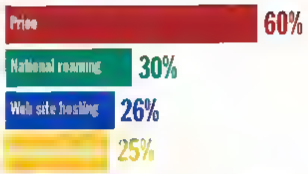
"Over 400 ISPs in Canada serve roughly two million customers," says Charles Whaley ERC's director, Internet studies, in a statement "The relative lack of mid-range players is attributed to the fact that when an ISP grows to 5,000 to 10,000 subscribers, it is likely to become the target of a merger or take over Like many other businesses, one of the keys to success is economies of scale, and the ISP industry is no exception"

A noteable 66 per cent of ISP revenues are derived from simple Internet access (at a median rate of $286 per year, per subscriber), with other revenues coming from Web site hosting, page design services and consulting

Evans says 91 per cent of customers connect to their ISP by modem, with 82 per cent using 33 6Kbps or slower technologies

Looking to the future, ISPs expected important technologies would include asymmetric digital subscriber line (ADSL), cable access, wireless access, enhanced switches and routers, 1Mbps modems from Nortel/Rockwell and (ATM)

FACTORS IN CHOOSING AN ISP



RESIDENTIAL AND HOME OFFICE CUSTOMERS

For residential and home office customers, price was the leading factor in selecting an ISP, followed by national roaming, Web site hosting, and recommendations from friends and colleagues, said Evans Interestingly, 60 per cent reported they'd purchased goods or services on the Web, and 35 per cent said they did so at least once a month. CCW

Evans Research Corp of Toronto is at (416) 621-8814

VOICE YOUR OPINION

Reader Poll

Last issue, we asked:

When YOUR customers are shopping for notebook computers, which factor is of MOST importance?

You said:

29% Processing power
59% Screen size and quality
3% Light weight
13% Long battery life

This issue:

Netscape Communications Corp. announced Communicator 4.04 is now available to users free of charge. Moreover, the source code for the next version of the software — Netscape Communicator Developer Edition 5 0 — will be made available to the Internet community

Our question to you:

What impact will this have on Netscape's eventual position in the market-place? Which most closely reflects your view?

- ☐ Netscape's strategy should help the company keep its position as a solid leader in Internet browsers and Web technology
- ☐ This helps Netscape's positioning against Microsoft's free Internet Explorer, but it remains to be seen what long-term effect the move will have
- ☐ Netscape is in significant danger of losing its leading role in Web technology to Microsoft, regardless of this action

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Congratulations

to our January winner of the CanTax software package: Steve Eisenreich, owner of PC Bytes, in Cold Lake, Alta.

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